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Estudos de Comunicação e Cultura

Culture, Translation and Cognition

Cognitive Culture Studies

Peter Hanenberg

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Introduction

At a certain point, the Universidade Católica Editor asked me to suggest an image for the cover of this book. Certainly, I would not repeat the image that we had chosen for the book *Culture, Translation and Cognition* – though I have always thought that it says nearly everything that I have to say. However, this time it had to be different and somewhat more concrete. Therefore, I started to imagine a scene at the bank of the River Rhine near Düsseldorf where I had spent many of my Sundays in my younger days. The low and long waves would sweep slanting against the beach… While these words came to my mind, I saw the small town of Kaiserswerth in the background, involved in the fog of early German history. And while the ferry was slowly crossing the river, the image blended into Lisbon's waterfront of my current Sunday mornings as if the Rhine flowed into the Tagus River. The bridge would be there to connect the shores and the notion of regret for not having been educated to be able to draw or paint the scene – or at least to take a picture of it. In the end, I would have to resort to one of those image banks which offer views of others for one's own purposes.

Reading through the account of this challenge and holding the book in your hands where the cover image is already given, you are thereby introduced into the main topics of the following pages. Cognitive Culture Studies aims at studying the relation between mind and culture and their mutual interdependence. The mind produces culture as much as it is shaped by it. Culture expresses meaning as much as it forms it.

An alternative title to this book could be borrowed from Peter Handke's *The Innerworld of the Outerworld of the Innerworld* which would count then as another reminiscence of the values of literature as in the quote of Uwe Johnson's words which I smuggled into the description of the Rhine's long waves. While the relation between cognition and culture is the scientific focus point of these

collected studies, literature is the privileged means to come to terms with it. The words are a cultural given as much as the image banks in the internet and in our memory. How the mind reaches out to its other side in the world out there and how this world translates into meaning, this is the overall issue of this book.

The first chapter claims the possibility and necessity of intersecting the study of culture and cognition, emphasizing the importance of a cognitive culture system and the interplay of neurons, empathy and literature. The second chapter introduces the term 'tacit knowledge' as key to understanding how culture shapes the mind. The concrete working of such tacit knowledge is shown in chapter III on the example of André Jolles' *Einfache Formen* and Aby. M. Warburg's *Pathos formula*. The following chapter presents a different cognitive process in the understanding of literary discourses on history, namely the concept of 'force dynamics' which in chapter V will also be applied to Walter Benjamin's ninth thesis on history. From Benjamin we take the idea of Utopia whose cognitive conditions will be explored in chapter VI. Chapter VII then explains the fundamental concept of 'intramental translation' on the example of Christopher Columbus' non-discovery of the New World. A last chapter briefly alludes to the practical consequences of tacit knowledge and intramental translation in the practice of intercultural communication.

Each of the chapters can be read on its own – or as a continuous accumulation of the underlying argument in showing how culture shapes the mind and how the mind forms meaning and culture.

Chapter I
Intersecting 'Nature' and 'Culture': How the Study of Culture Could Enhance Cognitive Science

Asking how the study of culture could enhance cognitive science is a radical question. It is radical in its attempt to reframe concepts in Literary and Cultural Studies – and it is even more radical in suggesting that such an endeavour could enhance science. In fact, it is not just for the benefit of a 'reframed' way of studying literature and culture that the following suggestions should be read; they should also be read as attempts to bridge science and the humanities for mutual improvement of scope and meaning. The disconnectedness between science and humanities is one of the main challenges to scientific development and knowledge. As we have learned from the history of science (*cf*. Latour 1993), the division between nature and culture is historical and artificial. Intersecting nature and culture could allow for new insights that re-establish the relationship between them. It is in the field of cognitive sciences and under the paradigm of culture that such an intersection can productively be developed. Culture continues the work of nature, leading to diversity and change. In arts and literature, cognition and culture meet in a way that allows one to recognize general principles via artful exploration and contemplation. That is why the study of culture does not only produce knowledge about culture itself but it also helps to develop a deeper understanding of cognition.

Why and How it Makes Sense to Study Culture and Cognition: Towards a Cognitive Culture System

Culture is a multidimensional concept. Following Roland Posner's proposal (1991, 2004), we can distinguish between three different dimensions of culture,

namely, social, material and mental. The social dimension refers to the uses of culture by individuals, society and institutions. The material dimension includes artistic works, architecture and literary and legal texts. The mental dimension, finally, has to do with mentalities, perceptions, norms and values. Of course, the three dimensions overlap at certain points (institutions comprehend values, texts express mentalities etc.), which leads to a specific density of cultural issues. In the history of Cultural Studies, questions regarding institutional dynamics and analysis of cultural artefacts have clearly been privileged over those pertaining to the mental dimension of culture. The sociology of culture has evolved as an independent field of study, as has the analysis of artistic works and literary or legal texts. In contrast, mental issues seem to have been sequestered into the field of psychology without consideration of their cultural interdependence with social and material conditions. With the rise of cognitive science, such division seems to have been further intensified. The mental dimension is reduced to a kind of mechanical intelligence that works like a brain machine.

Looking at the history of the study of culture, this book claims that it is necessary to reconsider its mental dimensions – and, looking at the younger history of cognitive science, it claims that it is necessary to introduce its cultural dimension (*cf*. Quintais 2009; Zunshine 2010). Comparing an introduction to Culture Studies (e.g. Assmann 2012) with an introduction to cognitive science (e.g. Castro Caldas 2000) reveals an impressive amount of shared topics that are dealt with, albeit from the perspectives of each discipline. 'Memory' and 'identity' are the most prominent points of intersection. Both disciplines also claim interest and expertise when it comes to questions of 'signs' and 'intention', 'embodied mind' and 'extended cognition'. These points of intersection have been explored in the context of a quite recently developed branch of Cognitive Studies: 'Cultural Neuroscience'. Joan Y. Chiao and Genna M. Bebko define Cultural Neuroscience as being motivated by two fundamental questions concerning human nature:

> [H]ow do cultural traits (e.g. values, beliefs, practices) shape neurobiology (e.g. genetic and neural processes) and behaviour, and how do neurobiological mechanisms (e.g. genetic and neural processes) facilitate the emergence and transmission of cultural traits? (2011: 23 f.)

The two questions already include two fundamental statements: Cultural traits shape neurobiology and behaviour and neurobiological mechanisms facilitate the emergence and transmission of cultural traits. The strong interrelation of cognition and its neuronal groundings in biology, on the one hand, and cultural traits, on the other, could not be stated more clearly. In this conception, research on culture and cognition is based on the study of genes in neurogenetics, which explains the brain. Social-cognitive-affective Neuroscience is used to understand the mind, while cultural psychology deals with culture.

Surprisingly enough, there is no place for the study of culture in the system developed by Cultural Neuroscience, which contributes to the concept's fundamental weakness[1]. When it comes to defining concrete topics of analysis, the authors refer to concepts of culture that do not correspond to the academic standards of complexity used in the study of culture. Instead, they develop, for instance, a study of the co-evolution of the so-called 'serotonin transporter gene' (*'5 HTTLPR'*) and two types of culture, characterized as 'individualism' and 'collectivism'. The difference between these types of culture is based on Geert and Gert Jan Hofstede's (2005) assumptions that cultures can be distinguished by certain indexes. Hofstede and Hofstede have analyzed cultural traits like beliefs, values and behaviours in institutions and organizations across nations and have concluded that there are five main indexes that define cultural differences, one of which is the distinction between 'individualism' and 'collectivism'. Hofstede and Hofstede's approach is useful and interesting, as it offers manageable categories – and, thus, has been impressively successful in all kinds of applied studies. But, nevertheless, the indexes cannot stand for the richness and diversity of cultural traits. On the contrary, they are mere statistical effects that tend to undermine rather than appreciate the real challenges of diversity. If, in fact, the distribution of a certain gene can be counted across certain populations, cultures cannot be counted or defined in the same way. Whether a certain gene exists or not is measurable but collectivism and individualism cannot be differentiated as 0 and 1.

The example of individualism and collectivism in culture as discussed by Chiao and Bebko draws attention to a second weakness of Cultural Neuroscience: not simply its lack of distinction between cultures but also its lack of a

[1] For further discussion of Cultural Neuroscience, see Joan Y. Chiao *et al*. (2013) and Andreas Roepstorff (2013).

clear definition of what counts as culture. The authors identify the concept of culture as a concept of the nation without questioning the artificiality of nations or the existence of cultures defined by other-than-national differences (such as religion, age or profession, to give just three instances).

This brief discussion of the limits of concepts pertaining to Cultural Neuroscience should, nevertheless, not be read as a rejection of its aims and purposes. On the contrary, the strength of a definition of culturally biased neuronal realities should be accompanied by a differentiated concept of culture. Such a concept must be developed by scholars who actually deal with the complexity of cultural realities. Cultural Neuroscience must be accomplished by Cognitive Culture Studies (*cf*. Hanenberg 2011; Zunshine 2010).

There are further findings in Neuroscience that confirm the need for such an interdisciplinary endeavour. One of the crucial discoveries of Neuroscience has come to be known as 'plasticity of the brain'. It has been shown that specific parts of the brain perform specific functions but that functions can be performed by substituting parts in case of injury. Impressive examples of children with just one brain hemisphere have shown how half of the brain can, nevertheless, do the whole job, allowing for a "remarkable extent of the plastic potential" (Wexler 2011: 3). Following Bruce Wexler's seminal observations, there is a crucial correlation between evolution and cultural development, which can be called 'cultural evolution' (*cf*. Distin 2011). Cultural evolution must be understood as the interplay between the plastic brain and new environmental inputs in a world of continuously evolving, "largely human-made environments" (Wexler 2011: 2). Anthropologist Michael Tomasello (1999) has emphasized the cultural origins of human cognition, pointing out the importance of cultural experience in the formation of the ways human beings think. The "recurring activation of some cells and pathways" (Wexler 2011: 2) can lead to "enduring aspects of neuronal structure" (*ibid*.). A striking example given by Wexler is the comparison between "'bulked up' motor cortex in the right hemisphere of string players" (*ibid*.: 12) and the bilateral development "in piano players who practice with both hands" (*ibid*.). Different cultural practices lead to different structures in the brain – including size and connectivity of certain cerebral regions.

The two examples discussed thus far yield a first, basic conclusion for the study of culture and cognition. In the first case, we recognize a certain genetic disposition (concerning the serotonin transporter gene) in co-appearance with certain cultural traces ('collectivism'). In the second case, cultural practice leads

to a change in brain structure. Both examples show how close and dense the relation between culture and cognition, and between culture and neurobiology, can be. For a deep understanding of cultural phenomena such as 'collectivism' and 'piano playing', such relations cannot be ignored. If it is true that 'collectivism' is accompanied by a certain genetic structure, an understanding of 'collectivism' must include a certain biological-sciences dimension. And if 'piano playing' changes the brain, the same biological-sciences dimension explains how something may or may not develop. In both cases, the biological effects of culture and the cultural effects of biology emerge. Such deep relations between what have been considered distinct realms of 'nature' and 'culture' challenge their separation in scientific analysis.

How does this scientific analysis work? In the first case, the relationship between 'collectivism' and '*5 HTTLPR*' is the result of a statistical observation (a high degree of collectivism correlates with a high percentage of *5 HTTLPR*). In the second case, 'images' of brain structure show that certain regions are bigger than others. As Wexler writes, they are "visible to the naked eye!" (2011: 12). In both cases, scientific analysis depends on highly cultural constructs, such as statistics and images, which are no natural essences at all: a naked eye may see, but it can never understand. There is a highly controversial concept in the first example (i.e., 'collectivism') and, in the second example, the cultural practice of string and piano playing is reduced to a motor skill, built upon the misleading idea that string players use just one hand to play their instrument. Defining statistical entities and relations and interpreting images are *per se* highly cultural practices. When they involve cultural traces and practices, they definitely demand specialized knowledge produced by the study of culture. Cognitive Culture Studies would bring together biological and neuronal findings, descriptions of cultural constructs and practices (such as 'collectivism' and 'piano playing') and an understanding of their mutual effects.

The endeavour is ambitious. But there is no reason to leave ambition to Neuroscience, Psychology or Artificial Intelligence. The study of culture has produced knowledge that begs to be articulated in discussions of science. As long as science is allowed to reduce culture to simplistic categories, Cultural Studies have to claim their critical potential – and enhance science. One first step in this direction would be a definition of the cognitive status of culture. Such a definition has been offered by Leonard Talmy in a description of what he has called "an innately determined brain system" (2003: 373), which he termed

a 'Cognitive Culture System' (*ibid*.: 373-415). This system "processes culture as a highly differentiated, systematic, and structured complex that includes certain categories of phenomena but not others" (*ibid*.: 373). As language, culture functions as a brain system, which is in part accessible to consciousness, but "consciousness is not a necessary or automatic concomitant of many operations of the system" (*ibid*.: 374). The cognitive culture system operates on the basis of "conceptual-affective" and "behavior patterns" (*ibid*.: 373); its "principal function is the acquisition, exercise, and imparting of culture" (*ibid*.). Talmy's claim is that culture is not something that exists merely 'out there' or as a Platonic idea somewhere in the heavens of philosophy and history, but that it can also be traced back "to a cognitive culture system resident in the individual" (*ibid*.: 414). On the one hand, there is a mental disposition based on specific neural provisions and, on the other hand, culture is the result of a social process in which acquisition, exercise and imparting of culture refer to an interpersonal reality.

This social process is crucial to the cognitive shaping of the culture system. In the acquisition function, the individual acquires certain patterns, norms and rules, internalizing a structure that determines the own group and outside groups and their members, directing attention to certain categories and ways of solving conflicts. The acquisition function, writes Talmy, "may operate most extensively and internalize patterns most deeply during the individual's childhood, [but] it can remain in operation throughout the individual's lifetime, processing cultural changes or transpositions to new cultures" (Talmy 2003: 374).

This first function of the cognitive culture system refers already to one of the main challenges for the study of culture and cognition. The question is in which sense the acquisition function is bound to childhood or open to further shaping during a lifetime. Talmy's view seems to privilege an open process, which would refer to a certain facility in the adaption to new cultural experiences. Neurobiological observations by Wexler (2006) emphasize – as we will see – a more conservative position, in which the rules, patterns and norms acquired in childhood establish an enduring shape in affection, emotion, thinking and behaviour. Regardless of the way in which this classical controversy might be solved, there cannot be any doubt that the acquisition of cultural patterns is a necessary and unpreventable mental process that leads to deep and influential cognitive structures.

The exercising function of the cognitive culture system "generates a conceptual-affective pattern in the individual and directs the individual in the performance of behavioural practices in accordance with the cultural structure it has acquired" (Talmy 2003: 374). The cognitive culture system guarantees a continuous congruence between concepts and patterns, on the one hand, and behaviour and the 'world out there', on the other. As Semir Zeki has shown, the "splendors and miseries of the brain" depend exactly on the correspondence of the acquired (or inherited) concepts and "our daily experience" (Zeki 2009: 49). A lack of correspondence between concepts and experience leads to "a state of permanent dissatisfaction" (*ibid*.) or "distress and dysfunction" (Wexler 2006: 170). In this sense, the cognitive culture system includes necessarily a third function that allows for its continuity through imparting and teaching.

This short description of Talmy's proposal might have shown how urgent issues in the study of culture can be addressed in a way that allows for answers based both on the dynamics of cultures and the structural conditions of cognition. The question of cultural diversity and cultural universals is challenged by Talmy's concept, which claims the "innately determined processing program of the cognitive culture system itself" (2003: 375) as being universal and 'uniform' to all human beings. Of course, the concrete acquisition, exercise and imparting of concrete patterns, rules and norms would allow for diversity, but, at the same time, this diversity would refer to a "commonality in the way they are structured and in the types of phenomena involved in this structuring" (*ibid*.). On this basis, a dialogue between universal human conditions and the diversity of cultural experiences could be productively addressed.

Already at the end of the 1990s, Paul DiMaggio had suggested a study of culture in this sense. Trying to join insights from psychology and sociology, his approach is based on the assumption "that culture works through the interaction of three forms" (DiMaggio 1997: 273): information, mental structures and symbol systems. Culture is firstly made of information held by individuals and patterned by common use and memory transfer. Secondly, mental structures shape "the way we attend to, interpret, remember, and respond emotionally to the information we encounter and possess" (*ibid*.: 274). And, finally, culture works through symbol systems that embed meaning and communication "in observable activity patterns" (*ibid*.). The interaction of information, mental structures and symbol systems gives rise to the complexity of culture, which needs to be considered in its study.

While Talmy's approach allows for a systematic understanding of the functions of a cognitive culture system, DiMaggio's approach reinforces the necessity for studying concrete information and applied communicative symbols as the elements through which the system operates. Cognitive Culture Studies should help clarify which ways of organization can be recognized in the field of information and symbolic orders – again, on the general level of universal cultural disposition and its emanation as concrete cultural reality. In other words, it may help to tackle the question of how a common, maybe neuronal, frame in the cognitive culture system translates into cultural actuality. In addition, it may clarify whether a common frame in a universal cognitive culture system leads to something that could be called 'the architecture of cultural domains', which is stable in its diversity.

Cultural Diversity and Change: Towards the Limits of Adaptation?

Culture varies through space and time. It is a central claim in the study of culture that difference is possible and important and that diversity means richness. But there is a difference also between 'change in evolution' and 'change in history'. What can we learn about history from evolution?

Merlin Donald (1993) has described stages in the evolution of culture and cognition that led to what he calls the 'modern mind'. It is this modern mind that counts for diversity and history, for change and difference. "Our brains and minds", writes Donald, "can be deeply affected by the overwhelming influence of symbolic cultures during development" (2000: 19). And Donald does not just refer to the influence of language and experience on thinking, but he also discusses their influence "on a much deeper, architectural, level" (*ibid*.), which "can actually remodel the operational structure of the cognitive system" (*ibid*.). "The clearest example", explains Donald, "is the extended and widespread effect of literacy on cognition. In this case, we know that the brain's architecture has not been affected, at least not in its basic anatomy or wiring diagram. But its functional architecture has changed, under the influence of culture." (*Ibid*.) Donald continues:

> The resources of the infant brain can be radically redeployed under the guidance of cultural change, which can gain its own momentum. In turn, this phenomenon, rapid cultural change generation after generation, is made possible by the extreme plasticity of the human brain in epigenesis. This crucial characteristic has allowed the human brain to adapt to the ever-faster rates of change that have become typical of modern society. It may appear self-evident that our brains have proven sufficiently plastic to have allowed us to come this distance, but it is not clear how far this trend can continue. We undoubtedly have cognitive limitations as a species, both individually and collectively, and will come up squarely against them at some time or another. (*Ibid*.: 20)

It is this challenge in the 'cognitive limitations as a species' to which a common effort in the study of culture and cognition will have to respond: Plasticity, adaptation and ever-faster rates of change, on the one hand, and cognitive limitations as a species, on the other. In his study on literacy, Donald has shown the increasing importance of "external storage systems" (1993: 269) for cultural development; Stanislaus Dehaene (2010) and others have shown the crucial development of new functional achievements in cognition; and, more recently, Michel Serres (2013) has written a paean of praise to a younger generation that picks up their gadgets as Saint Denis picked up his head and continued walking and talking. How far can it continue?

Donald's question, in fact, touches upon a crucial debate in contemporary culture. There are those who find recent cultural changes in information and communication technologies to create shallowness and even danger ("Is Google Making Us Stupid?", asked Nicholas Carr in 2008); and there are those who continuously praise the advantages of new technologies ("Playing Video Games Can Boost Brain Power" was a headline in *ScienceDaily* on 21 August 2013). Culture challenges cognition in such a way that one might even reach the point at which cognition can no longer support cultural change.

And cognitive limitations are not only challenged by information and communication technologies. Many other traditional ways of acquiring, exercising and imparting culture seem to vanish, as if the whole cognitive culture system is becoming weaker and weaker. In an ever faster changing culture, correspondence between an acquired cognitive culture system and daily experience is continuously under pressure. Wexler describes the process as follows:

> Internal neural structures are created that correspond to those aspects of environmental stimulation that are most commonly experienced by a particular individual. These structures then limit, shape, and focus perception on aspects of the information stream that are most like themselves. This increases the sense of correspondence between the external world and the internal one, and progressively limits the power of sensory stimulation to change the structures. (2006: 169)

An individual who does not find correspondence between internal neural structure and environmental stimulation will have to find a way to reshape either his mental structure or environment. "For the remainder of life, the individual largely acts to alter the external world to match an increasingly inflexible inner world", writes Wexler (2006: 143). And he continues:

> Projective processes have two components. The first alters the perception and experience of the external world according to preexisting internal structures. The second alters the course of events in the external, in this case primarily interpersonal, world in such a way as to increase the likelihood that subsequent events will be consistent with the preexisting internal structures. (*Ibid*.: 143)

Radical disparities between internal structure and external reality will create distress for individuals or entire communities. Wexler identifies such disparities historically in the "discovery of different peoples and cultures" (*ibid*.: 184), which means increasing experience of, and exposure to, diversified ways of establishing correspondence between mental structures and environment. In Wexler's view, such an experience might lead to pressure and conflict, which has to be considered with caution and in a way that accounts for both factual resistance and mental resilience in individuals as well as society at large.

Contemporary culture is undergoing profound changes, which demand continuous mental effort and social attention. Wexler acknowledges that such changes could even lead to completely new definitions of culture and – Talmy would add – the cognitive culture system in general:

> The cultural diversity we know today, a mixing of societies that were previously differentiated during extended isolation, would be replaced by a diversity born of contact among huge numbers of individuals shaped into fluid groups by the choices they make from a superabundance of educational and other activities.

> While these communities of thought, knowledge, activity, and customs might differ from ethnic and religious communities in interesting ways, I would not be the first to call them cultures, and they would create a richly heterogeneous human landscape. (*Ibid*.: 253)

In his reference to 'fluid groups', Wexler uses a metaphor reminiscent of Zygmunt Bauman's 'liquid modernity' (2000) – and not by chance: The notion of the experience of culture as one that corresponds to 'fluidity' or 'liquidity' poses remarkable challenges to the definition of culture and its mental structure. If the cognitive culture system is becoming 'fluid' or 'liquid' in a certain sense, then it might be even more difficult to recognize the way it works. Talmy's suggestion, that the cognitive culture system finds its main functions in the acquisition, exercise and imparting of culture, is present in Wexler's statement about the choices one makes "from a superabundance of educational and other activities" (2006: 253). How will these 'cultures' relate to the classical definition of culture as 'ethnic and religious communities'? How stable will such an acquisition be in all its fluidity? How 'deep' will it go into mental or even neural structures? When do changes disturb the correspondence between mental organization and environment and when are they inconsequential? There might be situations in which the natural adaptation to culture may no longer be sustained. Will the cognitive culture system be able to adapt to a "richly heterogeneous human landscape" (*ibid*.)? Will this landscape threaten or merely challenge the acquisition, exercise and imparting of culture? How much of this acquisition is actually a choice (and not an imposition)? What about those who do not have any choices in education as a consequence of poverty or austerity?

Culture has led to a new kind of change: Historical change is faster than evolution. History has allowed for the experience of diversity based on cultural options and the accumulation of knowledge, techniques and practices. Human cognition has simultaneously caused and followed this accumulation, empowered by the plasticity of its neuronal structure. The materialization of this accumulation in the form of culture is what has distinguished and singled out mankind from its ancestors. The study of culture and cognition is at the very heart of history. Studying the way mankind has structured the relationship between culture and cognition is a manifold endeavour. Cognitive science and the study of culture will have to work together if they want to understand some

of the most surprising mechanisms in this relation, such as the groundings of empathy and the case of literature. The conjunction of empathy and literature will, therefore, be described as one of those points where future work in Cognitive Culture Studies will certainly be fruitful.

Cognition Meets Culture: Mirror Neurons and Empathy in the Contemplation of Art and Literature

According to Suzanne Keen, 'empathy' is "a relatively young term, having entered the English language in the early twentieth century as a coined translation of the German word *Einfühlung*" (2007: 4). It is interesting to witness how the word *Empathie* is now returning to the German language as something different from what it was a hundred years ago. Of course, the phenomenon itself is much older than the German word *Einfühlung* and its English translation. Following Keen further, we might try to consider the difference between 'empathy' and 'sympathy', though they are closely related to each other. A statement of empathy would be 'I feel what you feel. I feel your pain', whereas a statement of sympathy would be 'I feel a supportive emotion about your feelings. I feel pity for your pain'. Empathy seems to be more radical than sympathy ('I feel your pain.'); sympathy seems to incite action in supportive emotion, which leads to further attitudes, or acts, to love and help. Sharing is crucial both to empathy and sympathy, and it is clear that both terms point, in a certain sense, to social dimensions and social commitments, which seem to lead from biology to ethical values and moral challenges.

The debate on empathy has been fuelled by the discovery of its biological foundation in the so-called mirror neurons. Mirror neurons are the most exciting discoveries in human science in the last 20 years. When the Italian neuroscientist in the group led by Giacomo Rizzolatti managed to describe the functioning of these neurons for the first time in 1995, a large number of experiments, studies, theories and speculations followed (*cf*. Rizzolatti/Sinigaglia 2008). Rizzolatti and his colleagues started by observing certain cells in the brains of monkeys and apes that 'fired' when they were not supposed to, which means that they exhibited unexpected electrical activity. Some cells that are usually active in, for instance, the brain of a macaque monkey grasping a piece of fruit showed nearly the same level of electrical activity when the monkey was

simply perceiving the act of grasping, that is, when another monkey or a human grasped the fruit.

The conclusion is, indeed, exciting: Perception and action are not categorically separated in the brains of primates, including human beings, as was later proved. Subsequent experiments have shown that the mirroring of neuronal activity does not occur when subjects simply perceive and execute random movements (e.g. stretching the arm). Mirroring occurs in correspondence with the intention behind the observed act: Mirror neurons react differently when an object, e.g. an apple, is taken and put aside or taken and eaten. Mirror neurons do not simply mirror action; they rather mirror the aim behind the action, the proper intent of an act.

This is an observation of far-reaching significance: It is not just about someone seeing what someone else does; it is rather about the capacity to understand what the other aims to do. Of course, in a certain sense, this discovery is no news, as we already knew from philosophy, history and life that people sometimes understand each other. Nevertheless, it was a breakthrough in the understanding of the neuronal basis of such capacities, and it definitely challenged the notion of a clear distinction between some neurons supposedly responsible for perception, others for action and others for understanding the aims behind actions. The brain does not function according to a division of labour. On a neuronal basis, these realms are inseparable. What is needed is a holistic perspective in which perception, action and understanding are somehow intertwined. When one sees an apple being grasped, the neuronal reaction is as if one would grasp the apple oneself. And when one sees someone else grasping an apple and eating it, it is as if one were eating the apple oneself.

Mirror neurons, thus, join the process of perception, 'action-activation' and 'intention-identification' in an inseparable chain of neuronal activity. And there seem to be other interesting neurons, namely, the so-called 'canonical neurons', which fulfil a subsidiary or subordinated function to mirror neurons. Canonical neurons do not only react when a certain action can be perceived, but they also prepare the motor system for activation, even when there is only an object that could be moved, grasped or eaten. Interestingly, canonical neurons adapt motor activation to the physical qualities of the object in observation, mainly with regard to its size. The study of canonical neurons in humans has only recently started and there are still a lot of questions to be answered,

namely, regarding their locations and their systematic distinction from mirror neurons (*cf*. Vuck 2009). The discovery of canonical neurons may actually allow for far-reaching considerations on how the mere observation of objects can sufficiently motivate a whole range of neuronal activities, or at least put them on 'standby' – an idea that must surely be relevant to any discussion of the reception of arts and literature.

The discovery of mirror and canonical neurons has caused speculations, theories and observations in many scientific fields, including the humanities. More recent experiments seem to suggest that mirror neurons are only activated when one observes the movement of someone else and not when one interacts with someone else (*cf*. Tylén *et al*. 2012). Mirror neurons fire when someone watches someone else grasp a piece of fruit, but they do not fire when one deals with someone else with reference to the fruit. If these experiences can be confirmed, we might conclude that mirror neurons' activity requires the status of observation and not the status of joint action. As long as we sit quietly in our corner and observe someone or something, our mirror neurons fire sprightly. But as soon as we interact, they seem to switch off.

If these findings hold true, they would not only be a severe blow to empathy enthusiasts (for empathy would be, at best, a contemplative state), but they would also demonstrate the fundamental importance of mirror neurons in the contemplation of art (*cf*. Freedberg/Gallese 2007) and the reading of literature (*cf*. Lauer 2007, 2009). Art and, with it, literature are the privileged domains of observation and contemplative reception. In art and literature, we find the ideal conditions for triggering a veritable explosion of mirror reactions without any danger of joint action switching these neurons off. In this sense, there can be no doubt that mirror and canonical neurons provide the physiological basis for empathy in the reading of literary texts. And it might be evident that art and literature invite a kind of pure mirror-neuron intensity – without the unpleasant effects struggling to grasp 'the fruit'.

The euphoria unleashed by the discovery of mirror neurons has led to even more euphoria concerning the concept of empathy and its social importance. Probably the most popular example of this euphoria is Jeremy Rifkin's book *The Empathic Civilization*, in which mirror neurons are simply declared "empathy neurons" (2009: 14). Rifkin uses neurological findings on mirror neurons to reinterpret world history and sketch a global philosophy of empathy that could lead to practical solutions for future challenges. He writes:

> We've long known that human beings and other mammalian species are 'social animals.' The discovery of mirror neurons, however, opens the door to exploring the biological mechanisms that make sociability possible. (Rifkin 2009: 83)

Rifkin's point is what he calls the 'empathic extension', which refers to the brain's ability to mirror another's intention as the basis for a conception of an empathic civilization:

> Without empathy it would be impossible to even imagine a social life and the organization of society. Try to conjure up a society of narcissists, sociopaths, or autistically challenged individuals. Society requires being social and being social requires empathic extension. (*Ibid*.: 42)

As fascinating as this discussion may be, it is always striking how the experience of literature and cultural history is ignored in the debate[2], as if findings in the field of Literary and Culture Studies could only be of concern to themselves. The long tradition in thinking on mimesis (*cf*. Abrantes 2014) and compassion started by Aristotle continued through the 18th century with the concepts of sympathy and sensibility (*cf*. Keen 2007: 42), the 19th century romantic notion of the 'sympathetic', Wilhelm Dilthey's *Verstehen* and Robert Vischer's *Einfühlung*; yet this tradition is widely disregarded. Taking these concepts into account in discussions of 'empathy' could enhance our understanding of it. Empathy is not just a basic neuronal phenomenon; it is also a complex cultural construction. Joining neurological findings and cultural history could make evident how art and literature represent a specialized cognitive competence: the ability to observe. Spectatorship is a cultural achievement in evolution, an evolutionary breakthrough for the human species. Observing as a cultural achievement leads to "metacognition" (Donald 2006: 5), which is what art and literature are for.

Such a combination of cognitive science and literature has been presented by Fritz Breithaupt in his book *Kulturen der Empathie* ('Cultures of Empathy'), published in 2009, which is of interest for two reasons: Firstly, Breithaupt describes empathy not only as the operation between mother and child and

[2] A rare exception is the groundbreaking article by David Freedberg and Vittorino Gallese from 2007.

training in the recognition of intentions and behaviour. Empathy is also the condition for larger social structures and, thus, the foundation of culture. Empathy, explains Breithaupt, is not a matter of a relationship between two people; it requires a third party who refers to the other two. Breithaupt, thus, describes empathy as "taking sides in a triangular relationship" (*Parteinahme in einer Dreierbeziehung*, 152). In addition to this finding, a second hypothesis might be of interest, namely, that this understanding of empathy is linked to narrative, to the development of the human ability to tell stories. If it is indeed the case that we understand by telling stories (*Wir verstehen, indem wir erzählen*, 10), then narrative is an amplifier of empathy, a form of parallel action in the subjunctive mode (*cf*. *ibid*.: 137). Breithaupt summarizes that empathy is a decision to take sides for one (and not the other), which is legitimized emotionally and rationally through narrative strategies.[3]

The 'third man' who appears in Breithaupt's triangular relationship hints at the importance of not actually being involved in the struggle, but rather keeping an outside position as an observer. As mirror neurons fire when we observe, empathy fires under the condition of the third person's distance. In the case of narrative, deeper insights and connections seem to make the picture clearer and allow a kind of firing and counter-firing of neuronal reactions, amplified by the state of observation.

Both the debate on mirror neurons and Breithaupt's approach to 'the cultures of empathy' make reference to a theory that should at least be briefly mentioned, because it might be a further building block with which the study of culture can enhance cognitive science, namely, what has become known as the 'Theory of Mind' (henceforth ToM). ToM refers to the fact that human beings are able to develop ideas of what others think, know, feel and want, as expressed in the following phrase frequently quoted in this context: "Of course I care about how you imagine – I thought you perceived I wanted you to feel." (Zunshine 2006: 30) As shown by Breithaupt, human beings further develop this kind of mind reading by taking a third position in the observation of scenes between other people. As spectators of narratives, humans explore certain levels of 'embedded mind reading'. Interestingly, we can even 'read minds' when there are no minds to be read at all, like peoples' minds in pictures. We

[3] "Empathie ist eine Entscheidung zur Parteinahme für den einen (und nicht den anderen), die durch narrative Strategien emotional und rational legitimiert wird." (Breithaupt 2009: 175)

suppose that there is a mind just because we see a face or a certain action or exposure or recognize a gaze.

According to Lisa Zunshine's arguments in her book *Why We Read Fiction* (2006), literature and fiction allow us, "through a shared capacity[,] to stimulate and develop the imagination" (17). And she continues:

> It is possible, then, that certain cultural artifacts, such as novels, test the functioning of our cognitive adaptations for mind-reading while keeping us pleasantly aware that the 'test' is proceeding smoothly. (*Ibid*.: 18)

The reading of a novel would be a kind of cognitive exercise, an experiment or a test to keep our cognitive abilities active in understanding each other. Literature would work, in this sense, as a test arrangement for the stimulation and training of empathic competence. Empathy is where knowledge, feelings and intentions are shared. In literature, the reader takes the position of a third party in which mirror and canonical neurons find the ideal conditions for their functioning. The reader's abilities in ToM are challenged and trained.

In a similar sense, Keen has tried to describe the relationship between empathy and the novel (which is also the title of her book), though not by building her arguments on ToM. At the end of her enlightening introduction to "Contemporary Perspectives on Empathy", she writes:

> That the novel should be singled out as a technology most adept at invoking empathy and shaping moral behavior challenges what psychologists have been able to discover about empathy, but it endorses what many people believe about the transformative power of reading and of reading fiction in particular. Perhaps repeated entrances into fictional worlds must occur to benefit the developing mind. (2007: 35)

However, if one tries to prove the effect of novels on empathy by looking at the concrete behaviour after reading, one must be disenchanted. Of course, those who helped Jews during the Holocaust may not have been more literate or more intensive readers than their Nazi counterparts – an obvious example that, in my opinion, has nothing to do with empathy and the novel, though Keen tries to make us believe otherwise. And it is not convincing "that characters need to be realistic, particularly lifelike, or even fully rounded to invite

engagement on the part of readers" (*ibid*.: 101) and, therefore, allow for empathy. One merely has to ask any young reader whether *Harry Potter* is an empathic endeavour due to its 'realistic, particularly lifelike' characters or whether one feels empathy with Hamlet because he is 'fully rounded' to see that the argument does not hold.

Keen's book seems to prove that any utilitarian approach to the relationship between empathy and the novel must fail. Asking "whether empathy can in fact be taught through reading" (*ibid*.: 11) or if "group survival might be repaired by reading" (*ibid*.: 12) means adopting a functional perspective on the question. Though Keen recognizes that 'didacticism is not required', she seems to search for statistical proof of the immediate effect of novels on the moral and ethical attitudes of readers (*cf*. *ibid*.: 20). Recent studies have shown that there is actually a measurable effect of reading on connectivity in the brain (*cf*. Berns *et al*. 2013). But there is still a lot of work to be done (*cf*. Nünning 2014). Keen spends only very few words on what she calls 'narrative techniques', focusing on character identification and narrative situation. I wonder whether we can and should actually look for a direct link between narrative techniques and (moral) behaviour. We might then mistake statistics for reasoning or – even worse – self-description for a veridical account.

As cultural achievements, reading and reading fiction can only be understood according to their long-term significance, both in terms of a phylogenetic perspective of culture and in terms of ontogenetic imparting. Culturally acquired, exercised and imparted, the capacity to read literature contributes to cognitive development, which builds upon the general ability for empathic observation, physiologically grounded in the firing of mirror neurons. The relationship between perception and conception was mentioned in the discussion of Wexler's perspective on culture and cognition and is applicable to ToM, in which observation is related to the identification of intentions. One must have a certain notion of which intentions might occur in certain situations to be able to identify concrete intentions as such. Identification must somehow predate the situation. It must, in a certain sense, exist before the concrete experience. Such notions have been named differently: frames, patterns, scripts or concepts.[4]

[4] *Cf.* Lenk (1995); Goffman (1974); Pöppel (2006); Shore (1998); Stockwell (2002: 75-89). Wolfgang Hallet (2012) has shown how the general 'concept of concepts' works in academic concepts and what conceptual transfer means.

Some of these concepts may be innate or inherited, others acquired and synthetic (*cf.* Zeki 2009). Concepts are crucial for understanding; without concepts, observation would never arrive at the identification of an intention.

In fact, the human mind is permanently involved in a process of relating what it perceives to certain conceptions of what the perception could mean. This relationship between perception and conception is crucial to our world-making and forms the basis of further cultural development. Our minds depend on this permanent process of receiving information and transferring it into meaning. This process, in which perception demands conception and conception builds upon perception, might rightly be called 'ception', as Talmy has suggested (2003: 139-75). The idea that our perception has to be transformed into meaning, and that we need concepts or categories to transfer meaning into perception, is, of course, not new. We find this insight in Immanuel Kant's *Critique of Pure Reason* (1781/2007): Whatever we see has to be transformed by a mental process to become meaningful. Thus, writes Nelson Goodman (1978: 6):

> The overwhelming case against perception without conception, the pure given, absolute immediacy, the innocent eye, substance as substratum, has been so fully and frequently set forth – by Berkeley, Kant, Cassirer, Gombrich, Bruner, and many others – as to need no restatement here. Talk of unstructured content or an unconceptualized given or a substratum without properties is self-defeating; for the talk imposes structure, conceptualizes, ascribes properties. Although conception without perception is merely empty, perception without conception is blind (totally inoperative).

As Zunshine reminds us in her *Introduction to Cognitive Cultural Studies* (2010), the importance of this circumstance has been present from the very beginning of what has become Cultural Studies, for instance, in Raymond Williams' *The Long Revolution* (1965: 33):

> The central fact of [the] new account of the activity of our brains is that each one of us *has to learn to see* [.] […] There is no reality of familiar shapes, colours, and sounds, to which we merely open our eyes. The information that we receive through our senses from the material world around us has to be interpreted, according to certain human rules, before what we ordinarily call 'reality' forms.

> The human brain has to perform this 'creative' activity before we can, as normal human beings, see at all.

We are not simply perceiving fur, legs and eyes, but we are recognizing a cat, a rabbit or a dog. We might call this process the 'translation of perception into meaning' (s. chapter VIII). The famous ambiguous images or reversible figures like the rabbit/duck images or the Rubin vase are well-known examples of how this process works: The same perceptual input can be 'seen' alternately as a duck or a rabbit. And once one has discovered both interpretations, the mind cannot stop switching from one to the other. It is interesting to experience how perception 'jumps' every three seconds (*cf.* Pöppel 2004), a task for which our cognition alone is responsible and that is completely independent from any change of input. Our cognition seems to be condemned to look out into the world at a regular pace to see if anything is new, yet it arrives at varied findings: Sometimes it arrives at one concept, then again at another. When we see the duck, we cannot see the rabbit and vice versa. One permanently translates the perception either into the concept of rabbit or into the concept of duck.

One can easily imagine how literature and fiction explore this permanent process of switching concepts, how they enhance the ability to 're-translate' observation, how they use ambiguity to assure attention and guarantee interest. Facing the ambiguity of images (and the world), the brain cannot but relate perception to conception. The cognitive culture system allows for the acquisition, the exercise and the training of concepts as a special mental literacy. This literacy offers concepts for either seeing a duck or a rabbit. Without this literacy, nothing can be seen. Our capacity to see the other concept depends on training – on a permanent readjustment of perceptions and conceptions.

One of the simple motors for enhancing cognition is repetition: You cannot avoid the power of repetitive inscription or even imprinting, as you must think of the white elephant when you are asked not to think of it. Literature is, in this sense, an excellent opportunity to practice the application of concepts. As with empathy, the status of the observer is crucial to its occurrence in literature. In 'ception', literature assures what Karl Eibl (2004: 340) calls a 'discommitted' (*entpflichtet*) process. This 'discommittedness' refers to cognition itself and allows for a cognitive pleasure (*Kognitionslust*). Whether it is useful or not, cognition enjoys itself with literature.

Studying Mental Conditions and Cultural Change: Improving Science

We cannot understand cultural processes without considering their mental conditions. Such mental conditions can be ‘biologically’ described and understood, as experiences in perception theory and the recent discovery of mirror and canonical neurons may confirm. One of the biological characteristics of the brain is what has been called the ‘cognitive culture system’, which finds a specific expression, for instance, in reading literature and experiencing fictional worlds. Seen as achievements in evolution, reading literature and experiencing fictional worlds are bound to the cultural origins of human cognition.

Human cognition builds upon common and stable biological conditions (like mirror neurons), which adapt evolutionarily to the conditions of concrete environments so that cultural forms of exploration may vary from culture to culture and throughout history. Human cognition is simultaneously formed (and, therefore, tends to stability) and plastic (and, therefore, able to change). Cultural history is a history of change. The real challenges in the dynamics of stability and change must be attended to in the study of culture, which will then also enhance cognitive science.

Chapter II:
“My Favourite Things”.
The proximal term of tacit knowledge

The title of this chapter might remind some readers of the famous John Coltrane whose LP with the same title was one of the great Jazz events in the early sixties. Maybe others will remember instead the musical “The Sound of Music” composed by Richard Rodgers and Oscar Hammerstein from the late fifties, maybe even in its Portuguese adaptation on stage some few years ago. Or some others might even remember both pieces of music – or should I say the unit that Coltrane built upon the Rodgers-Hammerstein original. And if one remembers any adaptation of the melody, one might even hear it, somehow like being in an inner ear.

When I chose the title, I tried to link attention to it with some other experience that I supposed might be familiar to the reader. And now by remembering some moments of the underlying musical experience, I tried to reinforce this linking – even for those who even might not have thought on it before. Actually, I was trying to support the arguments that I am going to develop by a previous aesthetic experience – and of course my intention is to transfer some of the good musical mood to what I am going to develop.

Even before I started arguing, I already occupied the reader’s brain by the repetition or by the revocation of a former auditory experience, that – as I said – some might even have heard inside their mind. “My favourite things” is one of those music pieces that we all recognize as something experienced before and that – once in our inner ear – is hard to forget. One might be “hearing” “My favourite things” even when this chapter is finished, rethinking the title or some of its arguments, for instance, or even just by chance, at night, when the reader is preparing to go to bed. Tomorrow, “My favourite things” will occur less frequently, maybe one will somehow forget it again, until the moment you meet the music or the title of my paper again.

“My favourite things” is part of our tacit knowledge. I will have to explain what this means. Of course, its content, the melody itself is not tacit knowledge, but it is knowledge (I know the melody) and it is memory (I remember the melody). When they occur, knowledge and memory are an explicit content that we can attend to or not. But “My favourite things” is tacit in the way it came up to the mind: as the auditory sensation produced by the quotation of a music title. What is behind this way of coming out to hear a melody just by reading three words? And why can one not forget the melody since I started to draw attention on it? One can’t help hearing the melody – and when one is a Jazz-Fan he will even feel the vibration of Coltrane’s saxophone.

Listening to Coltrane’s piece, we easily recognize the original melody from the musical – even though we might not be able to say how and what exactly makes us identify it as being simultaneously the same and different. Music specialists will do the job more easily, but they will not be able to explain the unspecialized recognition and why it lasts longer then the stimuli that make it work.

One of the key points in “My favourite things” is repetition. Already the original melody is widely based on the effect of repetition and serial enumeration. In repeating the central themes of the melody, Coltrane is even more radical in using this iterative principle, building the fascinating tension of his piece by a continuous oscillation between repetition and variation.

I would like to stress the general point of this argument in a twofold way: First I would argue that repetition and recognition are key-issues not only in “My favourite things” but in music in general. Music without repetition and recognition would just be noise. And: Music that is just repetition and recognition without any variation is nothing but boring, *pimba* as we call it in Portuguese. Patrick Colm Hogan has built up an interesting *Guide for Humanists* to *Cognitive Science, Literature, and the Arts* (Holms 2003), precisely starting with John Coltrane’s example. The point is that the effect of repetition and recognition is not only structurally relevant for music: it is for cognition at all. Our brain is constructed in a way that the cultural environment that it is exposed to shapes and sets up the structure through which the brain will attend the environment, trying to develop and maintain a coherent correspondence between the mental structure and the world experienced outside. This is valid not only in a short term perspective like priming your attention to my arguments through a musical experience. Instead it stands for the general plasticity of our brain, as shown in chapter I.

One of the simplest ways of shaping structures is repetition. A repeated input will cause the notion of familiarity that by itself will lead to a certain agreement between the inner mental world and the world outside. That what one sees, hears and feels first and repeatedly, will have a lasting impact on what one thinks and what one likes. In his book on *The Hidden Forces That Shape Our Decisions*, Dan Ariely asks himself and the reader:

> Could it be that we made arbitrary decisions at some point in the past (like the goslings that adopted Lorenz as their parent) and have built our lives on them ever since, assuming that the original decisions were wise? Is that how we chose our careers, our spouses, the clothes we wear, and the way we style our hair? Were they smart decisions in the first place? Or were they partially random first imprints that have run wild? (Ariely 2009, *loc*. 861-864)

And further in his book: "Perhaps it's time to inventory th[ese] imprints and anchors in our own life." (Ariely 2009, *loc*. 879).

This is the issue of tacit knowledge. Maybe our inclination to music (a quite useless thing, by the way) has to do with this "tacit power" of experiencing the interaction of repetition, melody or structure shaping and variation. As your music expectation is anchored by referring to a certain theme, chord or tonality, our brain is anchored to certain experience-based structures that aim at maintaining themselves through variation. In music we experience this interaction of repetition and variation as such – without any further reference (that is why we practice music without having any practical interest).

Another important point is that our brain selects certain stimuli and lets them make sense, while others are not attended. When you are listening to music you don't even hear you neighbour snore. Our brain does the same: such stimuli that do not find correspondence in your mental structure are rolled out, neglected or forgotten. You even do not notice that they are there (but your neighbour might, as he is sleeping and thus in a different structure than you). Bruce Wexler writes:

> Such processes are so common that they seem only natural, and the excess of input beyond processing capacity makes them necessary. Two points, however, are of current relevance. First, since these internal structures select and value sensory input that is consistent with them, they create an exaggerated sense

> of agreement between the internal and external worlds. Second, since internal structures shape perceptual experience to be consistent with the structures themselves, they limit further alteration of brain structure by environmental input. (Wexler 2006: 155)

Tacit knowledge emerges from the permanent effort of our brain to find a proximal relation between its own structure and its environment. Even distance is a means to shape proximity, in the sense that it establishes such relation. Therefore, distance and proximity are not opposed in a cognitive sense, as both describe a relation to the self. Distance not linked to the self would not make any sense. Distress and conflict emerge, instead, when no relation can be established from the individual brain to its environment. Thus, the opposite of proximity would be displacement.

So far, we have used two terms to describe the phenomenon that we are dealing with: imprinting and anchoring, two metaphors that try to describe how the environment acts upon our mind and shapes its structure in a way that is unknown to us but relevant to all we know. This is what I call tacit knowledge, first defined by Michael Polanyi in the famous sentence: "We can know more than we can tell" (Polanyi 2009: 4).

In the following, I will present some further kind of tacit knowledge deriving from the basic principle described before, trying to show the importance of this term to distinguish between proximity and displacement.

A certain type of tacit knowledge might be found in what Richard Nisbett called a *Geography of Thought* (Nisbett 2003). The basic point in this geography of thought is the observation again, that cultural environment plays a certain role in the way we think. Nisbett's main thesis is "that indoctrination into distinctive habits of thought from birth could result in very large cultural differences in habits of thought" (Nisbett 2003, xvi). His findings seem to prove that mind did not just develop evolutionarily and thus as the same for all mankind, but that geographical, social and cultural conditions lead to different practices and beliefs and thus to different kinds of thinking, individually, in the scope of a lifetime; collectively, in the form of different cultures. His argument is a long-term one, but still it is not in the sense of evolution, but of history. The main difference he tries to prove occurs between "Asians" and "Westerners", namely based on the distinction between classical China and classical Greece. "The ecologies of ancient Greece and China were drastically different

– in ways that led to different economic, political, and social arrangements." (Nisbett 2003: 32)

> Focusing on different things will produce different understandings about the nature of the world. Different worldviews will in turn reinforce differential attention and social practices. The different worldviews will also prompt differences in perception and reasoning processes – which will tend to reinforce worldviews. (Nisbett 2003: 38)

I do not want to discuss now whether the differences pointed out for Westerners and Asians are convincing or not. But it seems quite clear that Nisbett's theory highlights the importance of the environment for the way we think. We are familiar with this finding in two other circumstances. The first point is history – or what we might call a non-evolutionary evolution of mental processes. I argue that it is worthwhile to look at cognition not only in its structural conditions but in its concrete historical establishment. We could then recover such concepts like 'Discourse' in the sense of Michel Foucault, 'paradigm' in the sense of Thomas Kuhn or 'Denkstil' and 'Denkkollektiv' in the sense of Ludwik Fleck as specific forms of proximity built up by certain groups in time. We could consider those concepts as the historical establishment of a tacit knowledge assuring proximity to those who are in and displacement to those who are not.

But let me come back to a second point that is much more closely related to the question of geography of thought and thus to the construction of cultural proximity. Quoting Nisbett before, I used a word as polemical as Discourse, Paradigm and Denkstil. I am referring to the word "mentality" or "mentalities". Again, I would like to ask: What is the cognitive status of mentality? Is it just an airy idea or is there something behind that could account for a condition for cognitive processes? Riccardo Viale and Andrea Pozzali who have studied the "Cognitive Aspects of Tacit Knowledge and Cultural Diversity", actually claim that in addition to the universal principles, "the child also assimilates culture-based schemes and principles that determine the development of cognitive styles valid only at local level" (Viale & Pozzali 2007: 238). Those cultural-based schemes and principles give "rise to profound differences between various cultural areas in terms of the cognitive style" in what they call "Implicit Cognitive Rules".

This is the point where applied sciences like Intercultural Management start their research. Let me just give one example, maybe the most striking and most famous one: Geert Hofstede’s research on international differences in work-related values, which was mentioned in the previous chapter. One of his recent books speaks of Cultures and Organizations as the *Software of the Mind* (Hofstede & Hofstede 2005). Of course, Hofstede’s work is not cognitive research – it is mainly based on statistics and inquiries in the context of multinational corporations. But his research reveals interesting data exactly on the issue of cultural motivated differences in the way people think – differences that might even be measurable. Though the statistic finding does not prove any evidence on cognitive processes, it might help to indicate where we have to look for such differences in the way people think and act. Maybe we should have some doubts on the national approach behind his research – and maybe we are not willing to accept his idea that national ways of thinking and national values “should be considered given facts, as hard as a country´s geographic position or its weather” (Hofstede & Hofstede 2005: 13). But the dimensions of national cultures he studies could be a short description of the areas in which tacit knowledge is particularly relevant. These dimensions are the following: the indexes of Power Distance, Individualism, Masculinity, Uncertainty Avoidance and Long- or Short-Term-Orientation. The point that Hofstede tries to make, is that people think and act differently in or better on the basis of these issues. The “software of the mind” works differently if a certain index is higher or lower – leading to different outcomes and realities. Tacit knowledge in the sense of mentalities seems to work efficiently in the area of power (and resistance), in the struggle between Individualism and Collectivism, in gender questions, time-projection (as concerning memory and future projects) and when certainty and uncertainty are at stake. I would suggest that we should take these statistic findings seriously, because they describe a quite widespread area of differences in thinking and behaviour that are broader than the individual and smaller than mankind, defining a proximity that each individual may not be aware of.

But there is one important point, as I said before, where we should doubt Hofstede’s research, namely in his tacit apology of national differences. Hofstede’s research dates from the late 1970s and that means that his data is quite out of date – in spite of recent research undertaken to confirm the former findings. Some thirty years further in the process of globalization national differences somehow seem to vanish. Today’s culture seems much more

determined by hybridism and liquidity then by any certainty. Following Zygmunt Bauman we may characterize our contemporary culture by "the 'overvaluation' […] of the individual liberated from the constraints imposed by a dense network of social bonds" (Bauman 2004: 96). But this liberation causes a new challenge to the individual: an increasing mismatch between the acquired mental structures and the hybrid environment. A huge amount of "incongruities introduced by significant changes in the environment, produce distress and dysfunction", as Bruce Wexler (Wexler 2006: 170) argues. This is especially relevant for emigrants, as Wexler explains:

> Even when they make the effort, their neurobiological development is out of synchrony with the opportunities for skill and role development in the new culture. There is no match in their new environments for the knowledge and skills they developed in their original environments. (Wexler 2006: 236)

Somehow like the difference between noise and music, the mismatch between mind structure and environment means a challenge that might not be easy to act on: displacement.

Also new media and their challenges to the concept of identity stimulate a new view on tacit knowledge. Jay David Bolter and Richard Grusin argue that the 'windowed style' of World Wide Web "privileges fragmentation, indeterminacy, and heterogeneity" (Bolter & Grusin 2000, 31) and "that the unity of our selves is fractured" (Bolter & Grusin 2000: 257) by the media culture in which we live. The "remediated", the "virtual", the "networked" Self are three main forms how digital media reshape our culture's definitions of the self. The so--called "Second life" is an ultimate attempt to separate body, mind and world in autonomous entities sent out on their own. My avatar moves through the virtual world and his own appearance as a well-defined body can even counteract all what I am in real world: I can be thick or thin, tall or small, brave or coward – and even male or female. Imagine, my female avatar looking for a female fitness-studio in "Second life". What should I answer then, when another avatar asks me: "But are you really a woman?" (Bolter & Grusin 2000: 263). The argument is deep in two senses: first, because we can virtually separate body and mind in a way that my separated body is exposed to experiences that my real body-mind-unit never could achieve. The point is that there is no mind at all in virtual reality; my avatar is without mind – and thus without tacit

knowledge. Is there any proximity in second live? Isn't second live the institutionalization of displacement? Tacit knowledge – and that is the second sense – is, where I am really not a woman – and I am referring to gender, not to sex which would be just a body question that my avatar might answer on his or her own. As nation and identity my Self is in trouble: hybrid, fluid, remediated: as if it were "not concerned to give a faithful or consistent representation" (Bolter & Grusin 2000: 265) of itself.

The point is that this tacit conditioning of all my thinking is not just accidental and arbitrary. On the contrary: it is based on a general principle and a specific set of cultural configurations. The principle has been described by Leonard Talmy in the fore-mentioned theory towards a cognitive semantics. As quoted before, Talmy's main argument is "that there has evolved in the human species an innately determined brain system whose principal function is the acquisition, exercise, and imparting of culture" (Talmy 2003: II, 373). This so-called Cognitive Culture System "directs the individual, particularly the developing child, to preferentially attend to and observe certain aspects of the behaviour of the people most directly interacting with that individual, and to assess these observations for certain kinds of regularities, patterns, and norms" (Talmy 2003: II, 378f.). Further on in life, the "cognitive culture system can conclude that there are incompatibilities or conflicts between the patterns in two or more different groups assessed as relevant to the self" (Talmy 2003: II, 380), so that it might resolve "focusing on one pattern to the relative exclusion of the other patterns, developing a distinctive blend of two or more of the patterns, and developing psychologically compartmentalized forms of each of the patterns" (Talmy 2003: II, 381). But there is one thing that the cognitive culture system cannot do: it cannot abstain from the development of patterns and norms. You can be against certain patterns or norms, but you will need other patterns and norms to do so. And certainly, you can change your mind concerning certain patterns and norms but you will do it on the basis of other patterns and norms. And normally you will simply not know which patterns and norms you are referring to, because they seem so natural to you that you would take them to be universal right and reason.

But culture, patterns and norms are not universal and they cannot be taken for granted. They are – as Talmy showed – a matter of "acquisition, exercise, and imparting". Culture is not for granted: it is a matter of sharing experiences and intentions, and a matter of learning and teaching. That is why culture can

be changed, that is why culture can be lost, and that is why we need to know more about its tacit power on our thinking and acting.

"My Favourite Things" – the tacit knowledge, next to me and connecting me to my environment: I have already mentioned how perception and conception work together in the way we think. For this intimate relation between perception and conception, Leonard Talmy suggested the intuitive term of "ception" (Talmy 2003: I, 139-175). Ception counts on the inseparable relation between what happens in our brain (through the stimuli given by eyes, ears and other notions) and the world constituted as such which is simultaneously the origin of the stimuli. Ception is where proximity and distance build an inseparable unit. In this sense, a certain "transposition of meaning away from us" (Polanyi 2009: 14) is present to some extent in all tacit knowing. That is why Polanyi writes that "wherever some process in our body gives rise to consciousness in us, our tacit knowing of the process will make sense of it in terms of an experience to which we are attending" (Polanyi 2009: 15). And further: "[…] the process of education by which the human mind is brought into existence is a major exercise of these powers of understanding. The growing mind recreates the whole conceptual framework and all the rules of reasoning bequeathed to it by its culture." (Polanyi 2009: 45f.)

This recreation of the conceptual framework and rules of reasoning will establish a certain way of thinking – and it will be present in further ceptions, experiences, understandings, adjustments, decisions and acts. Once again: the argument does not want to claim the idea of a static determinism or an unchangeable fate. But it wants to emphasize the relatedness and embeddedness of our thinking concerning the tacit conceptual frameworks and rules established by culture and through education.

Tacit knowledge is the knowledge next to me that I even do not recognize as being knowledge at all. It is the structure shaped by education and former experience that makes up my mind and that I try to bring in correspondence with the new experiences that I make. Try to forget it – you will not be able to. As you are not able to forget "My favourite things".

Chapter III
Warburg and Jolles: a cognitive approach to the art of viewing and the art of reading

The following reflection is based on two assumptions that might be controversial. The first assumption is about *Pathosformel* [pathos formula] and *Sprachgebärde* [language gesture], the two fundamental terms in Warburg's art of viewing art, who first used the term in his 1906 writing on Dürer and the Italian antiquity (Warburg 1992), and in André Jolles' art of reading literature, developed mainly in his book on *Einfache Formen* from 1930. My first thesis is that these two terms can be compared and that they – phenomenologically taken – refer to the same concept. In further research this reflection might even be extended to Panofsky's concept of "type" and to Ernst Robert Curtius' notion of "topos".[5] My second and main thesis is that this concept can be explained (and explored) by some of the recent theories developed in Cognitive Studies. In this sense I will simultaneously deal with Warburg and apply a Warburgian interest in joining insights from the so-called Culture Studies and the so-called sciences.

The interesting point about *Pathosformel* and *Sprachgebärde* is that they seem to exist before concretization in the arts and even before their concrete meaning. Oscillating between a morphological pre-existence and its meaningful appearance, their floating experience is a challenge both to history and eternity, to universalism and cultural relativism. Whenever one deals with Warburg's famous *Mnemosyne*-Atlas-Project one can observe this challenge in action: The fact that the project is only bequeathed in vague drafts and ambiguous

[5] From the perspective of a methodological challenge, a comparison of *Pathosformel, Topos and Type* has been developed by Pfisterer (2003). See also the fundamental findings in Wuttke (1996).

representations only highlights the permanent entanglement of its observer between "I do not really understand what it means" and "There is something about it".

Intuitiveness as the anticipation of its meaning is what really delights our interest in Jolles and Warburg and their concepts of *Sprachgebärde* and *Pathosformel*. I will try to offer now some theoretical approaches from cognitive studies that might help us understand both: the terms *Sprachgebärde* and *Pathosformel*, as well as our interest in them.

The first concept that must be mentioned is the concept of schemas and scripts, which Ernst H. Gombrich referred to in his *Art and Illusion* even before the cognitive turn that we are suggesting (Ettlinger 1992: 510). Schemas allow us to establish a meaningful contextual knowledge in a given situation, which means recognizing a single occurrence in its contextual relatedness. Schemas exist before the given experience and help us organize our perception, understanding and behaviour. But schemas are grounded on experience as well and are thus permanently modelled and changed. We count on schemas to make sense of the world, but we do not simply depend on them as an everlasting predestination. There can be several types of "schema management" (as Peter Stockwell put it): schemas can be restructured or preserved, they can be reinforced or completed, disrupted or refreshed (Stockwell 2002: 80-81). But without them we hardly could make sense of what we perceive and experience. Some schemas even develop into scripts which define a sequence of expected behaviours for a certain situation. Entering a coffee shop we immediately know how to act (looking for a table, sitting down, asking for a coffee, paying and leaving again), though coffees and waiters and chairs and bills may be different from case to case. Those who have experienced the Lisbon Café *A Brasileira*, a *Wiener Kaffeehaus* and an American *Starbucks* know that scripts have a very limited validity – so that we sometimes leave the coffee shop quite disappointed by the coffee, the waiter, the chair or the bill.

Art and literature widely build upon schemas and scripts – and so does our recognition of *Pathosformel* and *Sprachgebärde*. The fore-mentioned findings concerning mirror neurons might even help explain how we develop our schemas and scripts by mirroring each other's mind. The so-called "theory of mind", i.e., understanding others as intentional beings, with a mental existence much akin to our own, depends highly on the assumption of scripts and schemas, which allow us to theorize in an outreaching complex manner.

Sprachgebärde and *Pathosformel* would be the impetus of scripts and schemas unfolding as a shared and contextual meaning. As such they would be simultaneously stable and dynamic, universal as a principle and historical in their unfolding. This first cognitive description could be a step forward in the analysis of their sophisticated and manifold experience in art.[6] There are still many doubts concerning theory of mind, mirror neurons and the perceptional and behavioural importance of schemas and scripts. But these doubts are no stronger than the effort to explain the mindful workings of the brain both as a common and an extraordinary experience.

A second theory from Cognitive Studies might suggest a further insight. Without contradiction to the former proposal, we might try to consider *Sprachgebärde* and *Pathosformel* as a way of conceptual integration, the so-called blending or "mental binding", first developed by Mark Turner and Gilles Fauconnier in their book *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. The theory has been widely applied to the analysis of metaphor, but – as the title of the book suggests – its scope is much broader. In our interpretation, the *Pathosformel* would work like a "presentation space" which is blended with the (representation of the) referent in a way that generates meaning. Again, we could count on a certain stability, continuity and recognition on the one hand, as we could experience on the other hand singularity and innovation. Following a later development of conceptual blending (s. chapter VI) we could imagine a relevance space working in the process itself, once again like an orientation towards restructuring, preservation, reinforcement, refinement, disruption or refreshment. Observing the concrete case of Dürer's "Tod des Orpheus", we might understand how the antique tradition and the modern vision worked together in Dürer's art. By joining the two attributes given by Warburg himself to the *Pathosformel* ("lebenskräftig"; full of life) and to Dürer's own position in painting ("bodenständig"; down-to-earth), we acknowledge the process of conceptual integration as a concrete moment in history: *Pathosformel* and Dürer's own position merge in the reinforced blend that gives rise to what we call the *Renaissance*. The blend would be what Warburg himself called the *Einverseelung*, (Warburg 2008: 3), a mental assimilation (figure 1).

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[6] *Neuroaesthetics* is the new discipline linking the long tradition of empathy in art theory to the observation of cognitive processes as in the case of mirror neurons. Such discussion must necessarily refer to Warburg's *Pathosformel*, as do David Freedberg and Vittorio Gallese (2007: 75).

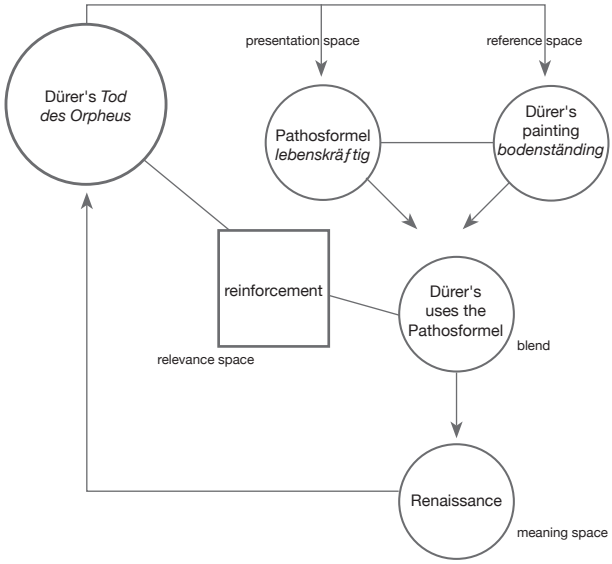


Figure 1

To understand the same procedure for the term *Sprachgebärde*, one can observe in figure 2 how the life and death of Mr. X is transformed through the presentation as a *Sprachgebärde* of virtue and wonder. The resulting blend gives rise to the meaning of the legend of a saint.

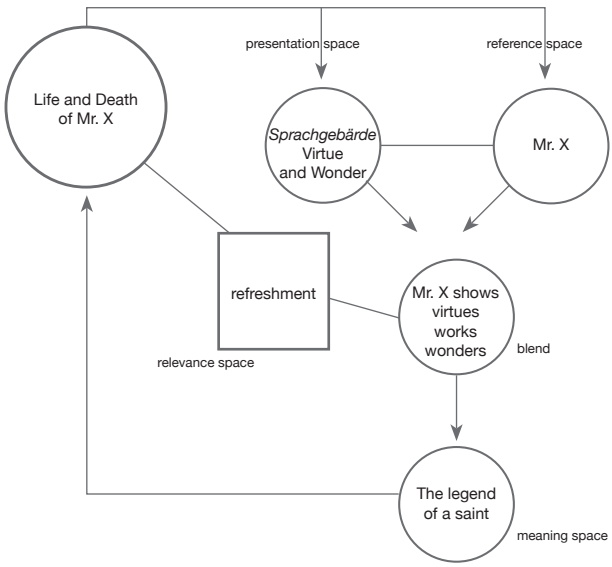


Figure 2

In both cases the conceptual integration of a given presentation space and a new reference space results in a concrete meaning. Just as there would be no legend without Mr. X and no saint without the *Sprachgebärde* of virtue and wonder, there would be no *Renaissance* without Dürer's painting and the *Pathosformel* reinforced by it. The process that we described is the way it makes sense, both for the author or painter and for us, who just receive the message for understanding.

In both cases I suggested that *Sprachgebärde* and *Pathosformel* are prior to the case or to its concrete experience. The same must be true for schemas and scripts that we identified as a first cognitive concept relevant for those terms. This allows me to ask now where *Sprachgebärde* and *Pathosformel* may come from. If they are prior to the case and to the concrete experience, where might they come from, where might they be at home? Are they universals or archetypes (as often suggested) that exist as an *a priori* transcendent category? From the point of view of rhetoric, Joachim Knape has discussed the meaning of *Pathosformel* and rejected clearly any significance in the use of the term based on the idea of a universal set of signs or archetypes (Knape 2008: 123, 129). For Warburg, *Pathosformel* seems to be less a rhetoric sign (Knape 2008: 131) than a vestige within what Knape calls the code of the European community of visual communication (*der europäischen Bildkommunikationsgemeinschaft*; Knape 2008: 135). What does that mean? Might this help explain why certain *Pathosformeln* could have been lost somehow in the Middle Ages – as Warburg suggests? Or how could they come to an end – as Jolles states for the legend of saints (though he recognizes that they found their "renaissance" in the sports pages of today's newspapers)?

I would like to propose an answer in two steps. First, I would like to refer to what Leonard Talmy called the "Cognitive Culture System" that has been explored in chapter I. Talmy provides evidence for his thesis that "culture is a highly organized cognitive construction, and that little in cognition of such a complex and systematic character 'just happens' without specific neural provision for it". This cognitive culture system is acquired in infancy, then turns out to be quite stable through lifelong exercise and is continuously handed down to the following generation. As we attempt to establish congruency between our conception of the world and the world we live in, incongruities between the environment and the developed brain, incongruities introduced, for example, by significant changes in the environment, produce distress and dysfunction

(Wexler 2006: 170). Through our cognitive culture system, we stick to "certain kinds of regularities, patterns, and norms" (Talmy 2003: 379) by which we experience the world and develop meaning.

Talmy refers to the famous list of 72 cultural universals proposed by George Peter Murdock in 1965 as the general framework through which culture emerges. Among the 72 universals we find cosmology and courtship as well as hair-styles and hospitality or sexual restrictions and soul concepts, just to give six examples in their original alphabetical context (Talmy 2003: 376). But we do not find *Sprachgebärde* or *Pathosformel*, because they are not universal in the sense of Murdock's list. Nevertheless, they are part of the cognitive culture system developed along our history in its concrete "regularities, patterns, and norms". As such they are a cognitive entity, prior to the concrete experience, but dependent on its acquisition, exercise and imparting. This might explain how the *Pathosformel* could have gone lost and be rediscovered again, why *Sprachgebärden* can die and then rise again. Certain "means of transmission"[7] guarantee their survival – though they might be "concealed" by other artefacts or cultural strata as Warburg explains in his introduction to the *Mnemosyne*-Atlas (Warburg 2008: 5). It mainly explains why we can share the notion of *Sprachgebärde* and *Pathosformel* and why they can work meaningfully as schemas and in conceptual integration, not as a genetic heritage but as a cultural experience renewable through continuous acquisition. The cognitive culture system is universal as a human condition, but it is necessarily historical in its actuality. Or in other words: We are cultural by nature. That is why Dieter Wuttke's suggestion that Culture Studies (he speaks of *Geisteswissenschaft*) should be the science of the historical world is a necessary reorientation in an artificially divided culture (Wuttke 2002: 58). And thus, Cognitive Studies as a reductive neuro- and brain science could never achieve an adequate insight about the historical process of mind and meaning.

I would like to consider a second cognitive model that might help us describe the challenge even more clearly. Figure 3 presents a simplified summary of the "Architecture of Semantic Domains", developed by Per Aage Brandt (2004).

[7] I borrow the term from Gertud Bing in Wuttke (1996: 684).

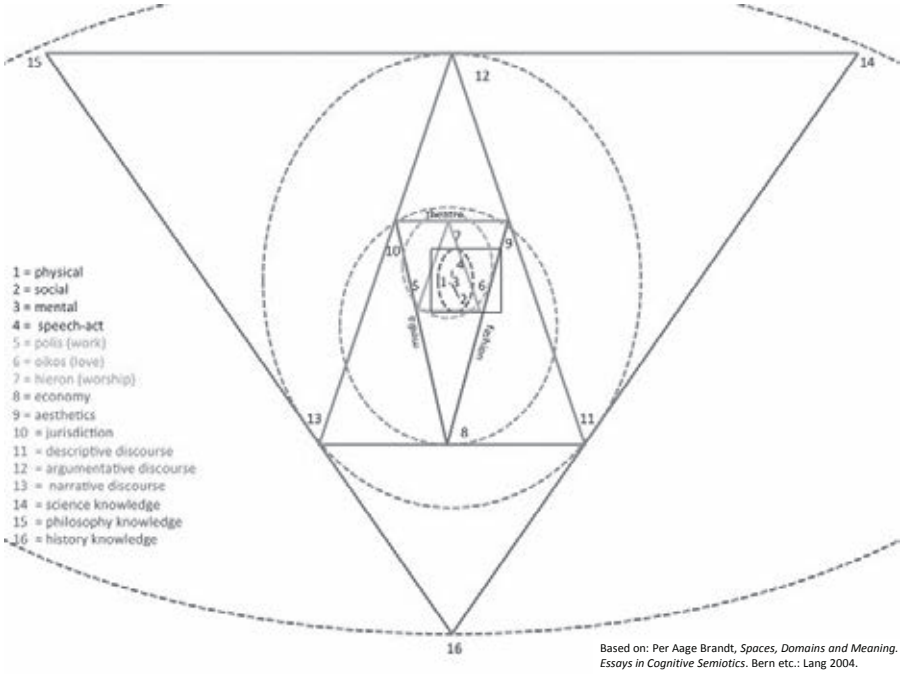


Figure 3 – The Architecture of Semantic Domains

In the centre of the diagram you find the four basic semantic domains (the physical, social, mental and speech-act domains), surrounded by twelve satellite domains. In a first orbit we find the practical domains (work, love and worship). A second orbit based on exchange establishes economy (exchanging things), jurisdiction (exchanging acts) and aesthetics (exchanging signs). As a third orbit we find the discourses of description, argumentation and narration that establish finally three domains of knowledge in science, philosophy, and history.

I will not discuss this architecture now – and I even do not want to suggest it as the final word on the structure of our semantic domains. I would like to use this structure just for the purpose of clarifying where *Pathosformel* and *Sprachgebärde* are – metaphorically speaking – at home. Here we come to some interesting findings. First, we recognize that *Pathosformel* and *Sprachgebärde* seem to be at home in the so-called domain of aesthetics since they are mainly determined by the exchange of signs. In the case of *Sprachgebärde* we recognize its deep foundation in the speech-act domain, while the *Pathosformel* seems to be outreaching to the narrative discourse.

Anyway, what is most striking about such observation is the fact that it does not fully satisfy a characterization of what *Pathosformel* and *Sprachgebärde* are about. And this second finding can help us understand why the cognitive description of their meaning is a complex endeavour: the interesting point in *Pathosformel* and *Sprachgebärde* is not where they are at home and what they mean in terms of semantic determination. On the contrary, *Sprachgebärde* and *Pathosformel* are ways of connecting domains of meaning and thus ways by which meaning is performed. Instead of situating *Sprachgebärde* and *Pathosformel* in an "Architecture of Semantic Domains", we should try to describe ways and forms of interacting and performing semantic structures. Or expressing this finding even more radically: *Sprachgebärde* and *Pathosformel* do not mean anything; they are just ways of performing meaning. It is their performative character that Warburg emphasizes in the task of representing "menschlich bewegtes Leben", humanly moved life, as he explains in the introduction to the *Mnemosyne* project (Warburg 2008: 6). The representation of humanly moved life leads Warburg necessarily to merge the ontological, the biological, the psychological and the point of view of fine arts.[8]

I would like to draw two conclusions from this observation. The first is that we might need to develop a new kind of cognitive architecture, not searching for meaning and semantic determination, but trying to describe cognitive forms of interacting and performing semantic domains. Instead of observing *what* one thinks, the question would be *how* one thinks. Not insisting on the content of meaning but on the ways and forms of its appearance. In the same way that Murdock's list cannot account for *Sprachgebärde* and *Pathosformel*, an "Architecture of Semantic Domains" does not provide the essential elements to describe them. Again: we already know a lot about the content of an "Architecture of Semantic Domains" and about the content of a culture cognitive system as described by Talmy. Murdock's list would be a kind of general lexicon of the culture cognitive system, varied by each culture in concrete forms. But we know very little about a general grammar of this system that determines the way in which the lexicon is performed. Ways of thinking – instead of contents of meaning, that is what *Sprachgebärde* and *Pathosformel* are about.

[8] As Knape (2008:124) pointed out, inviting to a critical evaluation of Warburg's attempt.

Using the metaphors of lexicon and grammar reveals how much of what *Sprachgebärde* and *Pathosformel* adhere to depends on cultural variety. As the lexicon, grammar is culturally determined. Thus, the second point to conclude from this observation is that *Sprachgebärde* and *Pathosformel* belong to what we started to describe in then previous chapter as tacit knowledge. Tacit knowledge is a term that we borrowed from Michael Polanyi and his famous thesis that "we know more than we can tell". Even though our research on tacit knowledge has only started and therefore has given rise to more questions than to any answers and still less to any certainty, we might agree beforehand that there is some tacit dimension in the way we think and that this tacit dimension is culturally imparted and shared. A *Pathosformel* would be a tacit way of representing humanly moved life, as *Sprachgebärde* would be a tacit kind of expression, both being culturally determined. In tacit knowledge, cognitive principles meet history as their cultural concretization. We do not have any cognitive principles without their cultural concretization and no cultural processes that are not based on the cognitive principles. In tacit knowledge, nature and nurture meet necessarily.

I imagine Warburg's library as the archive of tacit knowledge, and if it were able to speak, we would certainly know more about the way we think. If one could identify the coordinates in Warburg's *Mnemosyne* Atlas we would get a veritable map to tacit knowledge that would not only identify semantic domains but mainly the way they are linked together. A cognitive science seeking for the conditions and the performance of tacit knowledge will find in Warburg's and Jolles' work an identical interest: to find out not what, but how we think, view and speak, describing ways of blending, identifying scripts and schemas, naming patterns, rules and norms and recognizing the dynamic relation in the way they perform across semantic domains by building up cognitive culture systems smaller than mankind but embracing more than the individual.

The project would actually be a science of culture. And even before we can start to explore it further, we recognize immediately that this tacit knowledge is as powerful[9] as it is fragile. As tacit knowledge, *Pathosformeln* and

[9] Karl Sierek (2012) has given a systematic approach to iconic energy that seems to cover quite well the function of *Pathosformel* as tacit knowledge, mainly in what he calls the "orientational functions of the image".

Sprachgebärden must be acquired, must be practiced and imparted. That is what culture is about. That is why we care about the art of viewing and the art of reading. At risk always. Lost and re-found. That is why *Mnemosyne* is as much the goddess of the past as the guide to the future.

Chapter IV
Long waves or vanishing points? A cognitive approach to the literary construction of history

In the following chapter I will try to present four theses. The first thesis discusses two monumental works as turning points of German post-war literature. The second thesis – intertwined with the first – tries to show which cognitive concept of force-dynamics in history characterizes each of the works. We will briefly analyse the first paragraph of each of them to identify in which sense (third thesis) the texts establish their own limits and settings right from the beginning, creating a tacit condition of the framework within which the further development of the text can take place. Finally (fourth thesis), we will explain in which sense our findings might help to understand the fact that the novels lost their status of turning points after 1989. We might ask what is wrong in the concept of force-dynamics that characterizes each of the two works – and that seems not be adequate to the needs and interests of readers after 1989.

There are two more theses behind my argument that I should mention though I am not going to unfold them. The first is that we can apply theories of cognitive semiotics to understanding how novels and literature in general work and how they organize their force-dynamics structure in which turning points and processes (in a narrative sense) are supposed to make sense. And second, that such analyses might not just say something about literature but that this saying might be relevant for describing cultural and social changes or turning points (in the sense of History). But those two theses just build the tacit ground of my argument. I only mention them to give the reader a fair insight on my own limitations.

The first thesis within those limits is that two monumental works can be considered as turning points of German post-war literature, two outstanding

monuments of an attempt to understand the present through a deep reflection about the past (as Ralf Schnell pointed out in his *History of Literature* in the Federal Republic of Germany; Schnell 1986: 341).[10] I am talking about Uwe Johnson's *Jahrestage* and Peter Weiss' *Die Ästhetik des Widerstands*.

Uwe Johnson's *Jahrestage* (*Anniversaries. From the Life of Gesine Cresspahl*) was published in four volumes; the first appeared in 1970, the second in 1971, the third in 1973 and the last one only in 1983 (Johnson 1988). In 2000 Margarethe von Trotta launched an impressive film version of the book that I will not consider here. The English translation that I will use for quotation is based on a cut version prepared by Johnson himself and published before the last volume appeared (Johnson 1975). The book is a complex text built up like a diary written between August 21 in 1967 and August 20 in 1968. But the story covers much more than just one year. It tells us about Gesine Cresspahl's life, her family and friends, reaching out from the fictive city of Jerichow in Mecklenburg, East Germany, where she lived the times of the Nazi Regime and up to the moment when she left the German Democratic Republic and settled first in the Federal Republic and then (after 1961) in the United States. The book ends on the day when Gesine is flying for business to Prague, still unaware that Soviet tanks have occupied the city and put down the so-called Prague Spring. Gesine's reflections, her memories, the fictive dialogs with other figures like her father, her daughter, New York citizens or even the author himself ("Who's telling this story, Gesine?" the text once asks. "We both are. Surely that's obvious, Johnson." is the answer; Johnson 1975: 169).[11] And together with those voices we read others from historical documents or articles of the New York Times. It is not possible even to summarize one of the endless strands of the nearly 2000 pages, but it might be clear how much these *Anniversaries* are a literary representation of the 20th century's challenges, conflicts and catastrophes: from war, Nazism, and Anti-Semitism to the East-West conflict, racism and the Vietnam war. When the four volumes were finally finished, Germany seemed to have found a singular literary work representing those challenges, conflicts and

[10] The comparison between Weiss and Johnson has been further developed by Hofmann 1995, Honold 2002, Knoche 2002, Pflugmacher 2007 and Rector 2005.

[11] "Wer erzählt hier eigentlich, Gesine. Wir beide. Das hörst du doch, Johnson." (Johnson 1988: I, 256)

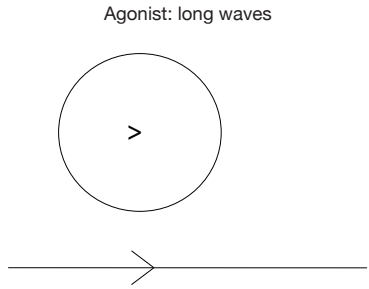
catastrophes that characterized contemporary culture. Thus, *Jahrestage* was celebrated as an outstanding turning point in understanding through literature the course of history. Johnson was considered an exceptional writer who managed to intertwine East and West perspectives and stories.

Let us have a closer look now at the beginning of the text (you will recognize some words from the introduction to this volume), where the main concept of history further developed in the novel is first presented.

> Long waves sweep slanting against the beach, hump muscled backs, raise trembling combs that tip over at the greenest summit. The taut roll, already streaked with white, enfolds a hollow space of air that is crushed by the clear mass as if a secret had been created and destroyed there. The bursting wave knocks children off their feet, whirls them around, drags them flat over the gravelly bottom. Beyond the surf the waves tug at the swimmer, pulling her on outstretched hands over their backs. The wind is only a flutter, with a wind as slack as this the Baltic had petered out in a ripple. The word for the short waves of the Baltic was choppity. (Johnson 1975: 3)[12]

The very first sentence of the text introduces movement: “Long waves sweep slanting against the beach”, a movement that seems to occur as such, presenting an agonist in action. Let me translate my statements into the figures suggested by Leonard Talmy as instruments to identify and describe force-dynamic patterns in language and cognition (Talmy 2003: 409-470). Here we have our agonist (the long waves) in action.

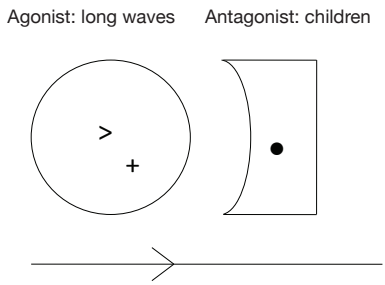
[12] "Lange Wellen treiben schräg gegen den Strand, wölben Buckel mit Muskelsträngen, heben zitternde Kämme, die im grünsten Strand kippen. Der straffe Überschlag, schon weißlich gestriemt, umwickelt einen runden Hohlraum Luft, der von der klaren Masse zerdrückt wird, als sei da ein Geheimnis gemacht und zerstört worden. Die zerplatzende Woge stößt Kinder von den Füßen, wirbelt sie rundum, zerrt sie flach über den graupligen Grund. Jenseits der Brandung ziehen die Wellen die Schwimmende an ausgestreckten Händen über ihren Rücken. Der Wind ist flatterig. bei solchem drucklosen Wind ist die Ostsee in ein Plätschern ausgelaufen. Das Wort für die kurzen Wellen der Ostsee ist kabbelig gewesen." (Johnson 1988: I, 7)



a) “Long waves sweep slanting against the beach”

Figure 1

The following lines of Johnson’s text describe the inner logic of this action as a complex process of force-dynamics. The waves go ahead by “raising” and “tipping over”, a top-down movement included in the forward action. This same movement is simultaneously presented as a creation of space (“a hollow space”) which is crushed again by the same movement. The simple cadence of the waves includes, thus, a three-dimensional opening and destruction of space, untenable in time. A comparison blends this untenable space with the concept of secret – an aspect that we cannot deal with at this moment. Only after creating and presenting the inner complexity of the waves as space and movement in time, do we finally see the force-dynamic effect of it: “The bursting wave knocks children off their feet”:

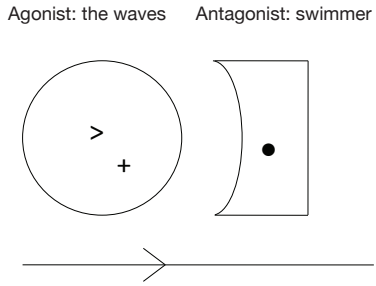


b) The bursting wave knocks children off their feet.

Figure 2

Again, this knocking off is not just a simple action, it is complex in the way that it “whirls them around, drags them flat over the gravelly bottom”. These actions are elaborations of the previous schema.

But there is still another action caused by the waves "beyond the surf", when they simply pull the swimmer over their backs, not causing any destruction or confusion. Outstretched hands guarantee the swimmer's stability:



c) Beyond the surf the waves tug at the swimmer, pulling her on outstretched hands over their backs.

Figure 3

The outcome of the waves' activity is not certain: it can "knock off" or just "pull over", which seems to be a question of position.

Finally, the text introduces a new agonist, the wind, giving rise to a second comparison, namely to the Baltic Sea and – as indicated by the past tense – to former times and former words and languages. This blending of space, time and language is a meaningful indicator of the complexity in the novel's structure – but I will not explore its meaning now. I prefer to ask one last question concerning the force-dynamics presented in these opening lines of the text: Is it the wind that causes the long waves? Would it be true to describe the real force-dynamic behind the sweeping of the long waves as the result of an agonist wind and antagonist waves?

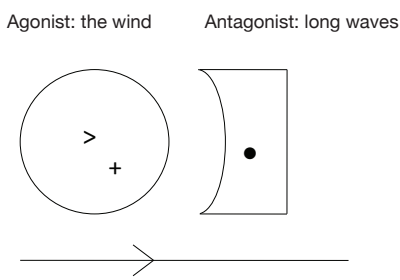


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Figure 4

Is this true? And if yes, how can we explain then that the same wind causes short waves in the Baltic? I am not sure whether the wind causes the waves – nor of which sort. And the text does not give any certain hint that would allow the reader to reach a conclusion. As he will not know for sure whether waves knock off or pull over. Sometimes they knock off, somewhere they don't. And though we know how complex the way they build up their force is (even inviting us to blend it with the creation and destruction of a secret), we neither know how that concrete result will come out of it nor do we know where the force itself comes from.

You might say now: a lot of words, just to state movement – lacking its explanation and all kind of expectations and predictions. But this is what Johnson's *Anniversaries* is about: showing the movement, showing what happened, showing even the insight of the waves, coming close to what would be a secret – without any premature conclusion and without any affinity to prediction. The novel does not try to explain what happened, it does not offer predictions or fulfil expectations. Our first force dynamic relation is as provisional as the second one and together they lack the grounding question of whether the waves are moved by themselves or by any other force. And there is something else about waves: they follow one after another as if their force were endless. Without an agonist that makes them move and without an end to come, the long waves seem to be more a symbol of time than of history, more a symbol of duration than of change. We could therefore say that long waves represent the domain of indecision forces – maybe even of forces which cannot be understood. Movement without change, movement building up and tipping down, knocking off and pulling over, this is the conception of force dynamics we find in Uwe Johnson's *Anniversaries*. We might recognize its attention to complexity, a complexity that refuses any short conclusion. We might call it inconclusive complexity.

Let us compare now these results with Peter Weiss' *The Aesthetics of Resistance*. Comparable to Johnson's *Jahrestage, Die Ästhetik des Widerstands* was conceived in three volumes, published in 1975, 1978 and 1981, at about the same time as Johnson's work. In nearly a thousand pages Weiss presents a kind of fictitious autobiography of a nameless narrator who spends his youth in Nazi Germany, participates in the Spanish Civil War and finally reaches exile in Sweden. The reader follows the narrator on this way, without actually knowing much about his personal life. The narrator gives instead voice to those he

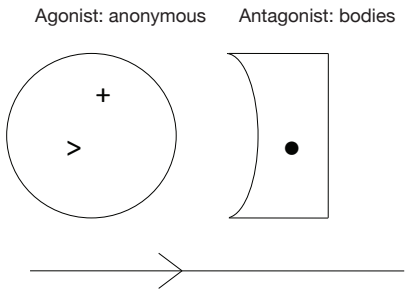
met on his way, to his friends and fellow combatants as well as to the artists and heroes of the artworks he appreciates and studies. Thus, the novel turns out to be a history of resistance – starting on the first page with ancient Pergamum and the raise of the giants against the gods, through the Middle-Ages and the 19th century up to the end of World War II. At the same time, the novel is a debate on art pieces which in some way represent or reflect this history of resistance, searching what might be called aesthetics of the oppressed and their fight for freedom, exactly an Aesthetics of Resistance. As in the case of *Jahrestage*, it is not possible to account for all the details or even subjects dealt by Weiss' monumental work. But we might try to understand the main concept of history that determines the interpretation of historical experiences in the world created by the narrator.

Luckily, I can base my arguments on the fundamental study developed by Ana Margarida Abrantes in her book *Meaning and Mind. A Cognitive Approach to Peter Weiss' Prose Work* which was published in 2010. Let us look again at the first lines of the text – we cannot discuss the whole first paragraph because it is about nine pages long:

> All around us the bodies rose out of the stone, crowded into groups, intertwined, or shattered into fragments, hinting at their shapes with a torso, a propped-up arm, a burst hip, a scabbed shard, always in warlike gestures, dodging, rebounding, attacking, shielding themselves, stretched high or crooked, some of them snuffed out, but with a freestanding, forward-pressing foot, a twisted back, the contour of a calf harnessed into a single common motion. A gigantic wrestling, emerging from the grey wall, recalling a perfection, sinking back into formlessness. A hand, stretching from the rough ground, ready to clutch, attached to the shoulder across empty surface, a barked face, with yawning cracks, a wide--open mouth, blankly gaping eyes, the face surrounded by the flowing locks of the beard, the tempestuous folds of a garment, everything close to its weathered end and close to its origin. (Weiss 2005: 3)[13]

[13] "Rings um uns hoben sich die Leiber aus dem Stein, zusammengedrängt zu Gruppen, ineinander verschlungen oder zu Fragementen zersprengt, mit einem Torso, einem aufge-stützten Arm, einer gebrochenen Hüfte, einem verschorften Brocken ihre Gestalt andeu-tend, immer in den Gebärden des Kampfs, ausweichend, zurückschnellend, angreifend, sich deckend, hochgestreckt oder gekrümmt, hier und da ausgelöscht, doch noch mit einem freistehenden vorgestemmten Fuß, einem gedrehten Rücken, der Kontur einer Wade eingespannt in eine einyige gemeinsame Bewe-

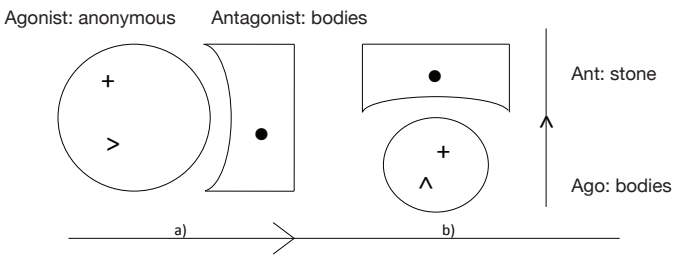
Right in the first sentence there is an anonymous force working on the subject of the sentence: the bodies are “crowded into groups, intertwined, or shattered into fragments”, an anonymous agonist working against the antagonist bodies:



a) The bodies “are crowded into groups, intertwined, or shattered into fragments.”

Figure 5

As it is meaningful that the agonist keeps anonymous, it is also striking that his force leads to two different results: crowding or joining on the one hand and shattering on the other. But there is also another movement, the movement of the bodies themselves which “rose out of the stone” in a kind of resistance against the greater force of their antagonist “stone”. Developing Talmy’s patterns we might imagine the scene as following:



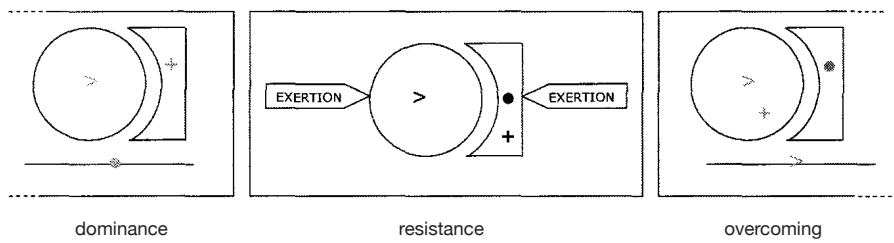
a) The bodies “are crowded into groups, intertwined, or shattered into fragments”
b) The bodies “rose out of the stone”

Figure 6

gung. Ein riesiges Ringen, auftauchend aus der grauen Wand, sich erinnernd an seine Vollendung, zurücksinkend zur Formlosigkeit. Eine Hand, aus dem rauhen Grund gestreckt, zum Griff bereit, über leere Fläche hin mit der Schulter verbunden, ein zerschundnes Gesicht, mit klaffenden Rissen, weit geöffnetem Mund, leer starrenden Augen, umflossen von den Locken des Barts, der stürmische Faltenwurf eines Gewands, alles nah seinem verwitterten Ende und nah seinem Ursprung." (Weiss 1991: III, 7)

The relation between these two movements is presented as a conjunction of force in simultaneity: moving and being moved. As a) inverts b) the verbs attributed to the bodies as agonist seem to oscillate between a minor force ("dodging", "crooked", "snuffed out") and a major one ("attacking", "stretched high", "freestanding, forward-pressing"), resisting and rendering in a continuous flow of force dynamics: "always in warlike gestures" and in "a single common motion".

The same seems to be true for the pieces of art the protagonists are observing in this scene: "the gigantic wrestling" is simultaneously "recalling a perfection" and "sinking back into formlessness". The main idea depicted in the first lines is thus, as in Johnson's work, the predominance of an anonymous force causing multiple effects. But other than Johnson's, this force is counteracted by the movement of rising out, interrupting the course of the predominant force without nonetheless interrupting its further impact. We can thus follow Ana Margarida Abrantes in the force-dynamic model of resistance that characterizes Weiss, concept of history (Abrantes 2010: 295):

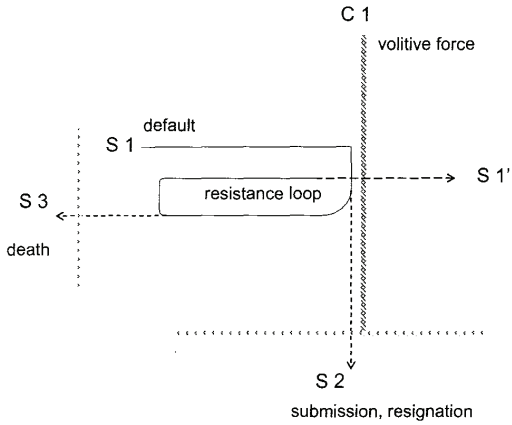


Force-dynamic model of resistance.

Ana Margarida Abrantes: *Meaning and Mind. A Cognitive Approach to Peter Weiss' Prose Work.* Frankfurt/M. *et al*.: Lang 2010 (= passagem 3), p. 295.

Figure 7

As Ana Margarida Abrantes shows, there will be multiple inputs of resistance along the novel. But the dynamic model is always the same, as can be seen by the narrative dynamic model for the concept of resistance (Abrantes 2010: 297).



A narrative dynamic model for the concept of resistance.

Ana Margarida Abrantes: *Meaning and Mind. A Cognitive Approach to Peter Weiss' Prose Work.* Frankfurt/M. *et al*.: Lang 2010 (= passagem 3), p. 297.

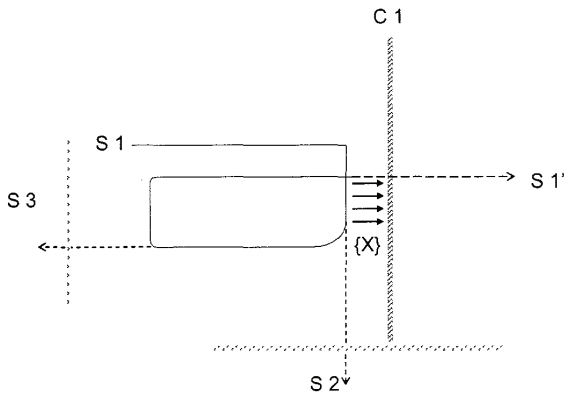
Figure 8

Abrantes writes:

> A person or group finds itself in a departure situation (S1), which they expect to continue to S1' by the mere passing of time [a kind of vanishing point in the future; PH]. At some point, they face a barrier C1 which prevents them to reach S1'. This obstacle can be a volitional agent, who deliberates to hinder the intents of the agents in S1. The result is that the agent in S1, previously in a neutral condition, is now headed for a crisis (S2). If this is permanent and the initial balance cannot be re-established, the crisis can lead to a qualitative change in the agent (represented by the crossing of the lower horizontal line), so that it permanently becomes S2 […]. In terms of the dynamics of resistance, this S2 corresponds to the permanent condition of oppression. C1 corresponds to the intentional behavior of another agent (the oppressors), who have the power to influence the initial condition of the persons in S1. S1 resigns and complies to its new condition, despite it being indeed an aggravation or unbalanced condition. An alternative to this development is an even more dramatic condition inflicted on the person in S1 by the impact suffered as it meets the barrier. The subject can recede to a condition from which there is no possible return: he cannot accept or resign to the dysphoric condition, he also is not strong enough to fight and overcome the barrier, and instead bounces back by the strength of the barrier

> to a condition that is prior to S1: non-existence. […] The only possibility for the agent in S1 to restore its original default condition is to insist on this condition against the volitional force of the agent of C1. This is represented in the schema as a loop, by which we intend to configure the impact of the harmful barrier and the dynamic reaction to it by the exertion of force. Only the intended goal of S1 is known, namely restoring the initial condition (hence the dotted line also towards SI')". (Abrantes 2010: 297-8).

The text establishes a vanishing point in the future which will not take place – hence its condition of utopia. And Abrantes continues to explain how this concept can be understood even as a continuous process: "Resistance", she writes, "implies a minimal duration: in this temporal stretch, the loop can be repeated in a rhythmic exertion of force, representing the recurrent actions carried out by the subject in S1 to oppose the barrier. In the following diagram, these actions are represented by {X}, which denotes an insistence or repetition of the actions carried out by the persons in S1 to overcome the volitional barrier imposed on them by the entity in C1."

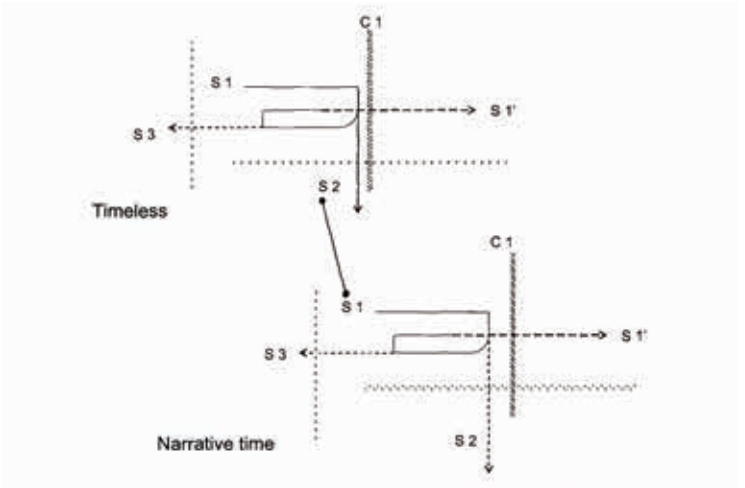


A narrative dynamic model for the concept of resistance
(multiple input of resistance against opponent barrier).

Ana Margarida Abrantes: *Meaning and Mind. A Cognitive Approach to Peter Weiss' Prose Work.* Frankfurt/M. *et al*.: Lang 2010 (= passagem 3), p. 298.

Figure 9

In this sense, the narrative dynamic model for the concept of resistance turns out to be a "timeless" schema that even determines the structure of the narrative schema itself, as shown in the following diagram.



A narrative dynamic model for the concept of resistance: continuity between the timeless schema of resistance and the narrative schema of resistance in "Die Asthetik des Widerstands".

Ana Margarida Abrantes: *Meaning and Mind. A Cognitive Approach to Peter Weiss' Prose Work.* Frankfurt/M. *et al*.: Lang 2010 (= passagem 3), p. 299.

Figure 10

The clue is that the continuous line of S2 in the upper part of the diagram portrays the permanent and repeated defeat before the stronger opponent barrier C1, the result of the force dynamics, which is well known, historical and factual. The narrative develops its own structure as a repetition of the concept of resistance under the condition of permanent oppression and failure. It opens up a new loop whose result can be predicted as belonging to the domain of submission and resignation.

You might call this quite unsatisfactory or even a contradiction. It might be at this point that contemporary readers do not find the answers and the pleasure they are looking for in Weiss' *Aesthetics of Resistance*. The end of the East-West conflict did not only abolish the concrete historical setting 'which Weiss' work is imbedded in, but it even made possible an experience that his concept of history and force dynamics could not give account for: a revolution that solved a problem and provoked a thousand of new ones which do not obey to the concept of resistance. It seems to me that the clash of civilizations (if it exists) cannot be understood under the concept of resistance, nor can the economic crisis, consumerism or migration or however you might characterize liquid modernity (Bauman 2000) and contemporary hybrid

cultures (Canclini 2005). Conviviality seeks a different kind of force dynamics (Gilroy 2004).

Readers of Weiss, book might feel that there must have been a turning point in-between, which provoked a worldview that does not follow the concept of resistance as developed in his work. And the same readers may find Johnson's *Anniversaries* too inconclusive in the long waves of an exhausting complexity. Of course, both works still document a state of things and a state of mind that historically marked an era which they were able to portray and to represent in an outstanding and singular way. Both works continue to be some of the best literary representations of a post-war state of affairs – and as such witnesses of an admirable aesthetic mastery and an inestimable value in cultural memory.

But the simplicity of one model and the undecided complexity of the other might not be considered as valid concepts of force dynamics in contemporary culture, where problems and challenges are multiple and concrete, and where solutions are supposed to be possible and achieved. Historical narratives of a divided world and timeless concepts seem to have burnt out: neither long waves nor vanishing points, just hard work to do.

Chapter V
Force dynamics: mental structures for conflict or How Benjamin th/sought history

The following chapter attempts to continue the discussion of approaches from cognitive sciences as valuable contributions to Culture Studies, with the aim of explaining how certain ideas and conceptions in culture theory work. It is not a very usual way of dealing with the subject – and maybe it will cause some strangeness and refusal. I will refer here to two basic models in cognitive science. The first is the fore-mentioned force dynamics, proposed by Leonard Talmy in his work *Toward a Cognitive Semantics* (Talmy 2003). I will follow his description of force dynamic patterns up to a certain moment, when Per Aage Brandt's model (presented in the book *Spaces, Domains and Meaning*; Brandt 2004) turns out to be more intuitive, accounting for the sequence of events and not just for a state of forces. Also, when I come to speak of the second cognitive category that we need to explain our subject, I will mainly refer to the model of conceptual integration (blending) developed by Per Aage Brandt.

Walter Benjamin's work is a key reference in Culture Studies; maybe one of the most quoted and most admired authors of an emerging complex scientific field. There are thousands of books and articles on his theory and even more books and articles *based* on his theory. And within his theory, the ideas concerning history are the most discussed and best explored issues, familiar to the whole community of Culture Studies – in a certain sense. Thus, this chapter seems to be somewhat superfluous – and maybe this is the friendliest characterization one will give it. I have to explain what I am going to do in the next few pages, as well as what I am not going to do.

First, I am not going to talk about *what* Benjamin thinks, I will instead focus on *how* he thinks. One should not take this distinction wrong. I think it could be quite helpful to take some insight of Benjamin's thinking that might even

explain why we admire so much what he thinks. The advantage of studying the way one thinks (instead of studying what this thinking is about) is very simple: it guarantees that this thinking is common to us and that we can share it; the content of one human mind is modelled by the structures of thought and can be communicated and thus reconstructed by the same structures of another mind. Let me explain this simple statement through two very basic assumptions that are so elementary that we normally do not talk about them:

– We organize our thinking through a certain set of structures that are potentially common to all people;

– This set of structures is neither endless nor undefined, but stable through diversity.

Of course, I am aware that this kind of assumption – despite being more than basic and simple – needs discussion, at least because we debate Benjamin and other authors not because we all think the same way but because we all think different things. And Benjamin is in the focus of our interest not because he thinks the way we think, but because he thought things differently. But consider for some moments that there must be a real basic link from your thinking to Benjamin's because without it we could not admire him! And this link is what I would like to call the stable set of structures that are potentially common to all people.

One element of this structure that we are going to deal with only once and very briefly is the structural conception of space. Where are you now? In a certain room, in a certain city and in a certain country, maybe in Europe, certainly in the world, on earth, in the Universe. Of course, you are there, but I am here in my office writing these arguments. You will find thousands of answers to the question about where we are, but you just have one structural conception to answer it: the conception of space. You would not accept an answer like "blue" or "smell" or "pfeifen" as a valid answer to the question. And I think that it gives a certain kind of peace to our life that we all know it.

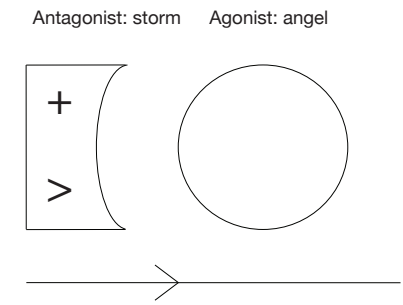
There is a lot of work to do on Benjamin's structural conception of space – consider only the strong acceptance that the idea of *Passagen* found since he declared it to be a favourite in modern worldview: a certain option in a stable set of structures.

In this sense, a few sentences from Benjamin's ninth "Thesis on the Philosophy of History" shall be submitted to the exercise of understanding how they are thought. Just one aspect will be taken into account, namely the conception

of force dynamics that Benjamin uses in order to understand and make sense of history. The following famous sentences will be the focus of our analysis:

> A Klee painting named 'Angelus Novus' shows an angel looking as though he is about to move away from something he is fixedly contemplating. His eyes are staring, his mouth is open, his wings are spread. This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing in from Paradise; it has got caught in his wings with such a violence that the angel can no longer close them. The storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress. (Benjamin 1999: 257-258)

There are three elements that make up Benjamin's idea or thesis: First, there is the angel, the angel of history, let us call it (or him?) the (prot)agonist in this setting. Second, we find the storm as a blowing force, let us call it the antagonist, and third we have a certain movement forward in time. I think diagram 1 (Talmy 2003: I, 414) shows quite well the basic organization of the setting. The sign + in the antagonist's symbol means that the storm is stronger than the angel and that it can make him (or it) move – willingly or unwillingly. The action is symbolized by the small arrow on the line.



a) The angel moves because of the storm.

Figure 1

So far we find a very simple setting that is one of the basic structures of every cause-relation in force dynamics: a) The angel moves because of the

storm. Force-dynamics is about causing and letting, including other notions that are strongly related to them, such as the "general notions of 'despite' and 'although', and such particular notions as 'hindering', 'helping', 'leaving alone', and […] 'trying'" (Talmy 2003: I, 429). Consider shortly the three other basic steady-states that can be conceived in the setting (Figure 2):

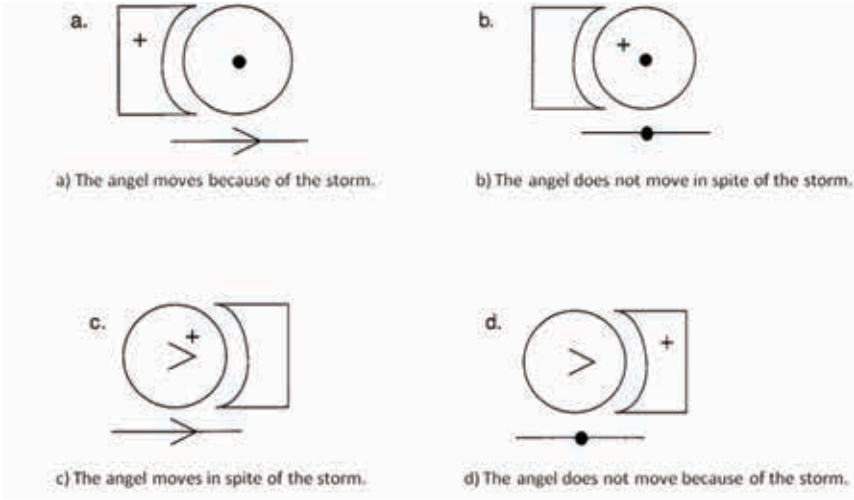


Figure 2

Benjamin's thesis would have been a completely different one if he had chosen one of the other steady-state patterns. We should be aware that we leave out three of four patterns when we follow now the idea a).

There is nothing special in the idea of a strong storm that makes an angel move (despite, perhaps, the fact that angels themselves are special). What makes the idea special are five other elements that complete the cognitive setting of the scene:

1. "The angel would like to stay, awaken the dead, and make whole what has been smashed".
2. The angel is blown forward, while the pile of debris before him grows skyward.
3. The angel sees things differently.
4. The storm is progress.
5. And finally: a missing link (that we are going to explore later).

The first point is the crucial one because without it there would be no dramatic tension in the thesis but just interpretation. The point is that there is another force dynamic relation expressed by the angel's will to act (by staying, awakening and making whole what has been smashed; I will call it the will to help). We must therefore imagine the angel as being a setting of a force dynamic pattern wherein the will is the agonist and the ability the antagonist (Benjamin repeats the setting by mentioning the attempt to close the wings), as shown in figure 3.

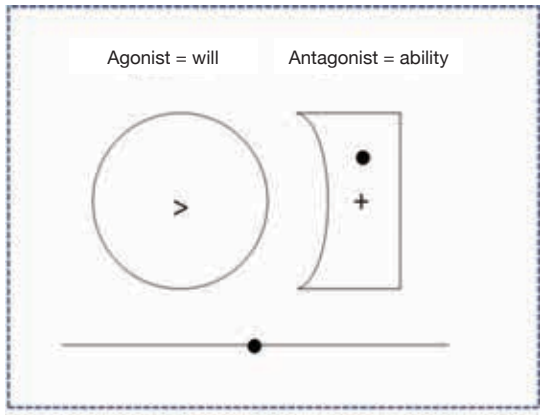


Figure 3

Taking into account the two settings we recognize a shift between the story or thesis that actually is given and the other one that could be given. I would like to emphasize two points in this argument that seem to repeat on a structural or cognitive level what Benjamin's thesis is about: Wherever causation is, there is a story behind it, or in other words, "Causation is born in the past." (Brandt 2004: 76). And second: It is precisely in the givenness of the setting that one finds the potentiality of its otherness, or in other words, that the story could be different. One easily recognizes how this structure works in figure 4 (now following Brandt's model "On Causation and Narration"; Brandt 2004: 69-86).

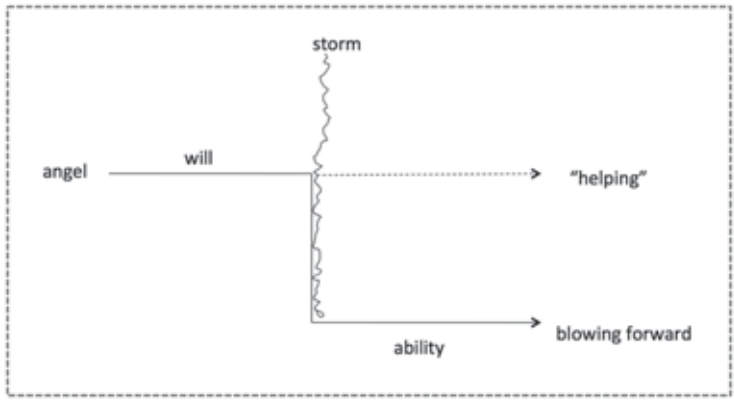


Figure 4

The shift in the angel's action line opens an undefined space between what is actually given (and to be observed) and what could be imagined instead of it. You see that Benjamin's thesis does not live just by its factuality; it turns out to establish potentiality as well – by the simple means of force dynamic patterns that visibly work in it.

I should now turn to a second story within the thesis, namely the story of how to perceive history, which I mentioned above in point 3: The angel sees things differently. We find two ways of perceiving history in the text: first "our view" (expressed by "Where we perceive a chain of events") and second the angel's view: "he sees one single catastrophe". There is a shift in perception, forced by the angel's strange point of view, as shown in figure 5.

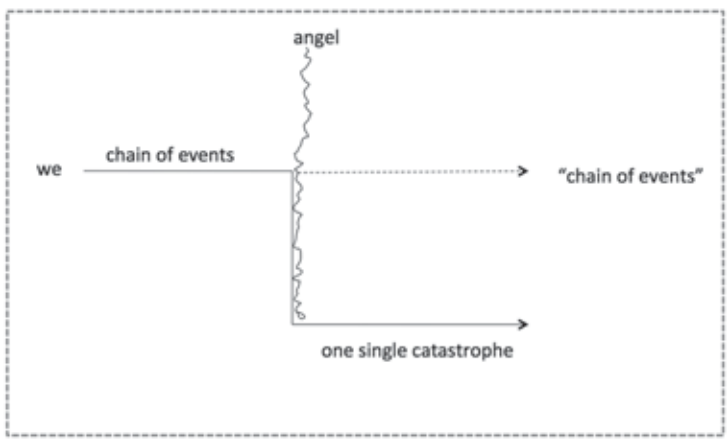


Figure 5 – Force dynamics in the perception of history I

Significantly “our view” returns at the end of the thesis when one reads that the storm is “what we call progress”, our forth point above. If we put the two stories (the storm-story and the perception-story) together, we recognize that the storm brings perception back to “our view”, which conveys the ongoing undisturbed chain of events as progress. Figure 6 shows how this inversion works by joining diagram 4 and 5.

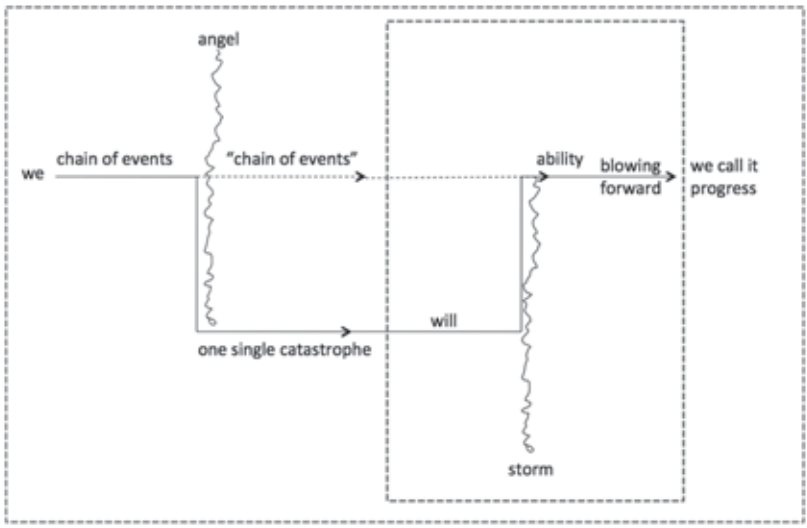


Figure 6 – Force dynamics in the perception of history II

So far nothing changed. Let us now try to clarify the last point, the missing link, as I called it. The question is: where does the wreckage in front of the angel’s feet come from? The answer is: from the catastrophe: “the catastrophe keeps piling wreckage and hurls it in front of his feet.” But isn’t wreckage and catastrophe the same force? Does catastrophe create wreckage or does wreckage create catastrophe? What is the agonist and what is the antagonist? Which force is stronger? Can wreckage stop or move catastrophe? Can catastrophe move or stop wreckage? Diagram 7 shows: this does not work.

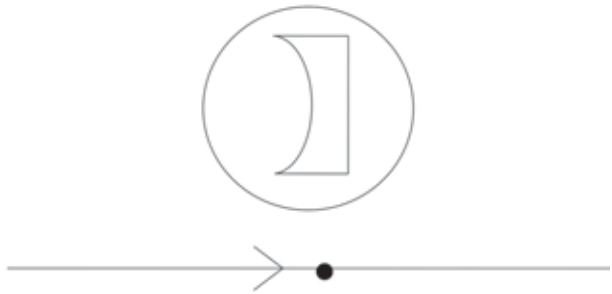


Figure 7

So, we might look for a better agent that makes catastrophe and wreckage, and of course we suspect of the storm. But the storm is not guilty, as one clearly recognizes in the conjunction in the following sentence: “The storm irresistibly propels him into the future to which his back is turned, *while* the pile of debris before him grows skyward.” The pile of debris grows not because of the storm but during the storm, there is strictly no causal relation between catastrophe and storm – just a temporal one, which is not a question of force dynamics but of time structure and we should be careful not to mix up these things. In time conception, “while” is a very interesting conjunction, because it brings things and things, and people and people, and things and people together. Thus, it does not belong to the sequential or physical domain of time conception, but to the so-called social domain that focuses on the aspectual dimension. Things happening at the same time are time-related but not force-dependent from each other. Furthermore, in Benjamin’s thesis this time conception builds up a very interesting structure in which time and space are blended together. The keywords are “into the future” and “skyward”, that open an own space of time-space correlation as shown in diagram 8.

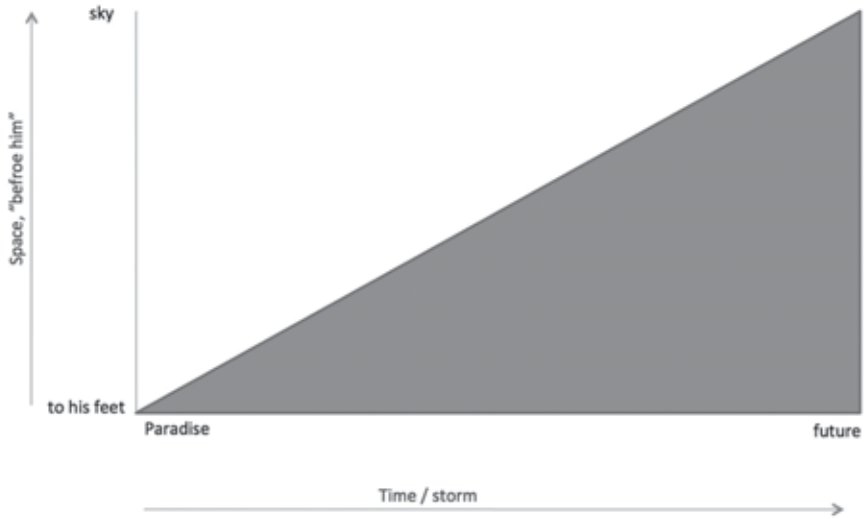


Figure 8 – Time-space correlation

The storm comes from Paradise, but where does the catastrophe come from? It seems that there can only be one answer: the catastrophe comes from the angel's strange perception. The catastrophe is a matter of perception: seen by the angel and right to his feet. Actually, even the angel does not know where it comes from, he just sees it. And the reader, taken through the angel's point of view, is finally left on his own again, while a strange perception challenges his philosophy of history. Force dynamics does not help us understand this idea. We have to apply a different cognitive model to explain what happens here. Very shortly, I will try to show how blending (as a cognitive function) works in this perception of history (diagram 9).

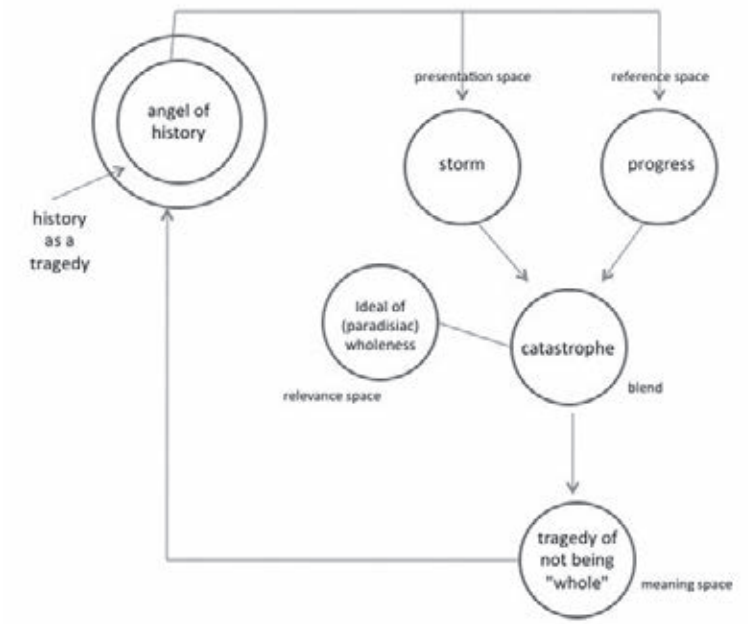


Figure 9 – A blend in the perception of history

Once again one finds the angel, a reference space that we call progress and a presentation space named storm. These two spaces are blended together in the "catastrophe" where things have been smashed. What makes this blending work is the idea of wholeness (that comes from paradise) in the relevance space, so that we understand the blending as the tragedy of not being "whole". And tragedy results also from the fact that this process is irreversible; not even willpower can reverse the outcome – as shown by the force dynamic patterns applied in the text. This meaning turns the angel into a tragic hero and history into tragedy. This is what Benjamin's thesis is about.

The way back to paradise is closed: it is a matter of interpretation and – mostly frustrated – a matter of will. Is there any help to change things? There is no help, only the will to change. This must be the key to the high acceptance that the thesis usually finds. The main message of Benjamin's thesis is the ongoing existence of a will to change things (or to make them whole again), independently of all force dynamic relations it is imbedded in. It is the messianic idea of setting oneself out of history, announced, as it should, by a powerless angel blown through the times.

But I will have to stop here, because we are going to get into interpretation now, and I promised just to deal with the way Benjamin thinks and not with what he thinks (or better: what we think that he thinks, or even better, what we think that he thinks we ought to think). I hope it became quite clear in which sense cognitive approaches and models (like force dynamics and blending) can help explain how Benjamin could think what he thought – and why we can understand it.

I would still like to ask one last and provoking question concerning Benjamin's thesis: On the past few pages we have gone through a chain of arguments that make up this chapter. Would it not be an interesting idea to think of the chapter as one single catastrophe which keeps piling wreckage arguments and hurls them in front of your feet? If you manage to do so, we finally know who the angel is. Doing so, we identify the basic elements of Benjamin's ideas of history and their deep relation to conflict and memory born out of a special way to think. This leads us to the following chapter on how to conceive Utopia.

Chapter VI
Why Utopia is possible – and why not. Observations from Cognitive Culture Studies

From the standpoint of factuality, Utopia is a provocation both in cultural terms as in its cognitive conditions. How can we think things which really are not (or which are not real) – and which are even thought to be impossible? How can thinking the impossible be possible? How can the strange ability in utopian thinking be explained?
The following chapter tries to answer these questions in five steps. First it will give a brief introduction to the main assumptions of Cognitive Culture Studies (I). In a second and in a third moment it will present some insights into innovative thinking (II) and conceptual integration (III) which are at the basis of utopian thought. Then the presentation explores a grammatical feature as a means of making it possible to talk about the impossible (IV), and finally it will show how such thinking and speaking is not just an idea but an embodied experience (V). In a concrete sense, Utopia, thus, comes back to us.

To recapitulate: What does Cognitive Culture Studies mean?

As we have seen, Cognitive Culture Studies is a recent field of research and tries to bridge knowledge from two different fields: from Cognitive Sciences and from Culture Studies (Hanenberg 2014). The so-called Second Cognitive Revolution has brought science to the recognition that brain and mind cannot just be understood as a machine. Cognition in its double dimension of thinking and feeling does not just produce information, but embodied effects of meaning. The Second Cognitive Revolution therefore builds on an extended understanding of cognition that includes cultural and social dimensions which

had been widely ignored in the previous phase where Artificial Intelligence and Computing seemed to be the ultimate goal of Cognitive Sciences. (We are not going to discuss here a certain tendency of current research to fall back to the first stage). Simultaneously, a semiotic turn in Culture Studies opened perspectives to understand culture in a threefold way or as referring to three dimensions (Posner 1991). A first dimension (without any priority over the others) is the social dimension of culture, the fact that cultures occur in groups and manifest themselves through institutions. A second dimension is referred to as the material dimension of artefacts and any form of texts in which culture and meaning are defined, exposed and preserved (like shown in chapters III, IV and V). A third dimension is finally found in the mental aspects of culture which turn into codes, values, beliefs and "mentalities" that institutions expect and artefacts manifest. This is the point where Cognitive Culture Studies takes place – and where it works with the aim of informing research on the social and material dimensions about the mental conditions of culture.

In his reflection on the concept of culture, Per Aage Brandt (2011) has discovered a certain tendency of mental and material culture to resist against the pressure of change introduced by – what he calls – socio-functional structures. This observation seems to correspond to other findings mainly on the adaptive capacity of the brain which is referred to as the plasticity of the brain. Seminal research on *Brain and Culture* offered by Bruce Wexler (2006) has not only proven the wide capacity of the brain to adapt to changing environments as it has also shown the effects of the environment and cultural practices on the neural structures of the brain (s. chapter I).

These observations seem to be relevant to the issue of Utopian thought. From a practical standpoint, brain and mind search a "correspondence between the external world and the internal one" (Wexler 2006: 169) – and when this correspondence does not occur one can either opt to change the mind or to change the world. Utopian thought then only takes place when there is something wrong in the relation between mind and environment that seeks a certain kind of equivalence. To describe this process, I suggest speaking about intramental translation: seeking meaning in blending perception and conception (s. chapter VII).

The classical example to illustrate the process of convergence between conception and perception are the so-called ambiguous pictures like the Rubin vase or the famous duck-rabbit image. The permanent change in the

perception of a duck or a rabbit represents the continuous effort of the brain to seek "correspondence between the external world and the internal one": is it a duck or is it a rabbit? In order to ensure that there is nothing wrong, the brain has to try out again and again if its conception meets the observed – even for the price of not coming to terms with it. A lack of correspondence includes risk and distress – therefore anything has to be done to avoid it.

If Brandt's thesis concerning a certain resistance to change in culture (what we could call its conservative or patrimonial function) and a certain drive to transformation (through socio-functional structures) is right, and if Bruce Wexler is correct in his description of the brain's plasticity and in his observation of a certain limitation in the ability to change mental structures increasing over time, then we might find here the basic conditions of utopian thought: Utopia is negotiated between a tendency to stability (in brain and culture) and a plasticity (of brain and culture) open to change.

The challenge then is that in utopian thought things that are out there and things which are not are brought together in a new meaning: a clear victory of conception over perception. But if the negotiation between stability and change is a permanent effort both in brain and culture – how then can its suspension be meaningful? An "ambiguous image" of a different kind might help us understand the underlying process.

Flying pigs

From Benjamin K. Bergen's seminal book *Louder Than Words. The New Science of How the Mind Makes Meaning* (2012), I take the image of the "Flying pig" to show that the mind is able to "imagine" things which do not exist. However, the example also shows that the mind does not create meaning arbitrarily. On the contrary, the meaning is built out of what can really be observed – though in a new form. Flying pigs do not really exist, but we know what 'pig' means and what 'flying' means. The creative process which leads to a new image is in this case first a simple add-on of a quality (flying) to an object (pig) which would not show this quality in the so-called real world. Our mind does not reject this artificial combination to a new meaning as long as it is built on accepted concepts – though in a surprising combination. Creative or utopian thought is foremost the combination of qualities and objects which normally

would not go together. In this case, the cultural shape of each of the concepts defines the meaning and form of the outcome, as the differences between a flying pig imagined as a *Pigasus* on the one hand and as a *Superswine* on the other illustrate.

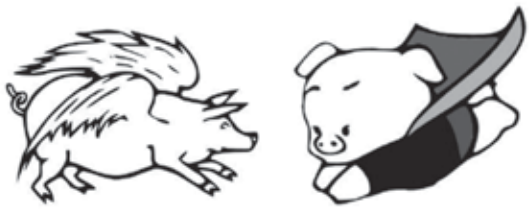


Figure 1 – *Pigasus* and *Superswine* (Bergen 2012)

Research on creativity has widely discussed "What's Old about New Ideas?" – concluding that structured imagination both relies on and expands common concepts. Creative ideas, writes Thomas B. Ward, "are most often a mix of new and old, and there is value in attempting to assess the unchanging, underlying frameworks and the variations that are developed within them." (Ward 1995: 167). Flying Pigs in their double presence of 'Superswine' and 'Pigasus' are a striking example of how to think things beyond perception. Thinking or speaking about flying pigs means to imagine a swine as if it could fly – or something which flies and looks as if it were a pig. A flying pig is an combination of two well-known concepts into a new idea.

As we can think and imagine flying pigs we can think and imagine many things which do not exist. The principle of combination is a first step to think something new. Add a new aspect to an old thing and you are on the way to creative and utopian thinking.

Conceptual Integration

If the flying pig can still simply be seen as a combination of old meanings to a new meaning, another cognitive performance takes place when one says, e.g. "This surgeon is a butcher." This sentence is the famous example through which Line and Per Aage Brandt (2005) have explained the process of conceptual integration. Conceptual integration allows to blend a "presentation space"

(like the generic butcher) to a "reference space" (the concrete surgeon) whose qualities merge with the qualities of the generic butcher. In this virtual space one can actually see the surgeon as if he were a butcher, which leads to a new meaning in which the surgeon is criticized for "butchering" his patient instead of healing him. A sentence like "This surgeon is a butcher" shows the productive blend of presentation and reference, supported by a certain equivalence of relevant attributions to each of them. The metaphor which the sentence produces develops on the ground of the distinction between butcher and surgeon as much as on the correlation of their activity in cutting. Finally, in the same manner as surgeon and butcher are blended into their common quality as agents, meat and patient are merged into a common meaning of "being object to". The argument "behind" the metaphor builds upon an ethical evaluation of both the butcher's and the surgeon's agency and the "objectness" of meat and patient, enhanced by the "fact" that meat and patient share their objective quality as meat.

Two observations are important for our further argument. First, one can see how a simple sentence and the blending of reference and presentation can work as critique on an ethical ground. Whoever uses the sentence in a concrete situation (and only a concrete situation allows for the use of the demonstrative pronoun "this") does not simply state something but the statement implies a clear critique, based on the ethical assumptions of agency and healing. In other words: the sentence does not make sense as such but only as a performance of both a concrete illocutional relevance (based on the situation) and an argumentational relevance based on ethics.

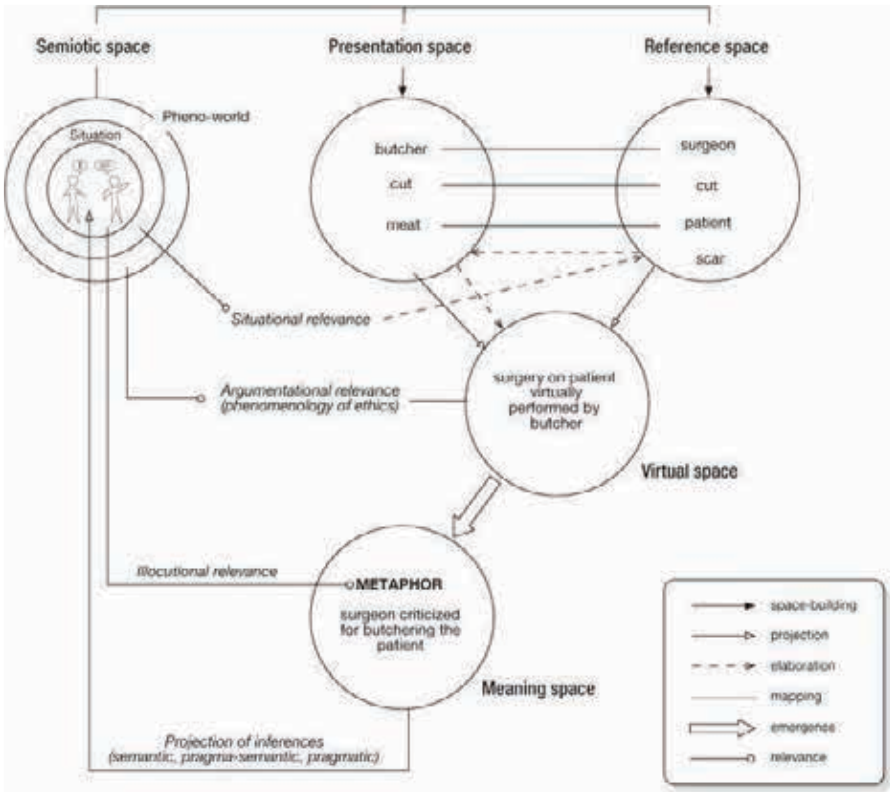


Figure 2 – Making sense of a bend (Brandt & Brandt 2005)

A second observation might complement the first: The simple sentence entails a given grammatical structure which limits and shapes the argument. A predicative expression in the form of a subject complement expresses a property that is assigned to a "subject", following certain syntactical rules and a limited offer of linking verbs to apply. The sentence "this butcher is a surgeon." is possible from the standpoint of grammar, it would, nonetheless, make no sense or at least a completely different sense than the original sentence. A sentence like "this surgeon loves a butcher" would also make sense, whereas sentences like "this surgeon blues a butcher" or "this surgeon moon a butcher" or "this surgeon is a very" would not make sense. In other words: grammar limits and shapes what can be said and what can make sense when said. The limits of grammar are the limits of sense. We should therefore be grateful to grammar's far extent (we will come back to this).

Conceptual blending works in Utopian Thought, by blending the state of affairs with the discovery of what is not. By merging what is and what is not, the utopian thought allows to see what could be. The moving force behind this blend is negation: Where one finds hierarchy in Europe, one does not find it on the Utopian island, where one finds war in Europe, peace is rather the case there, suffering and explored work here and happiness and shared labour there. Utopia emerges from the negation of what is into the claim of what could be. Without blending Raffael's report of the island with the experience of Europe's coeval state of affairs, the text would just be a curious account. Only when it is blended into the concept of an Ideal State does it start to make sense: as a critique and an invitation to change. Thus, also Thomas Morus' Utopia does not make sense as such, but only as a performance of both a concrete illocutional relevance (based on the historical situation) and an argumentational relevance based on ethics. The technique of conceptual blending is a motor for utopian thought.

Alternative facts: a case for the subjunctive mood

If the first step into utopian thought is the negation of what is and thus driving language to the statement of what is not, grammar offers special modes to deal with contradiction, absence or what now is famously called 'alternative facts'. Alternative facts are a challenge to cognition because they question the correspondence between perception and conception, between what one experiences and what it holds to mean. The question of correspondence (and stability) on the one hand and change (and plasticity) on the other represents a dynamic widely explored in poetry and literature. The final passage of Heinrich von Kleist's *Erdbeben in Chili* (1807) might be a good example for that:

> Don Fernando and Dona Elvira then adopted the little stranger as their own son; and when Don Fernando compared Felipe with Juan and the ways in which he had acquired the two of them, it almost seemed to him that he had reason to feel glad.[14]

[14] "Don Fernando und Donna Elvire nahmen hierauf den kleinen Fremdling zum Pflegesohn an; und wenn Don Fernando Philippen mit Juan verglich, und wie er beide erworben hatte, so war es

The contrast between Juan, the legitimate son who was killed by the mob after the earthquake, and *Philipp*, the adopted child born out of the scandalous relation between a nobleman and a nun, could not be stronger: Juan is dead, *Philipp* alive, Juan is the legitimate son, *Philipp* a bastard, Juan is born out of love, but *Philipp* an achievement from fight and violence. Juan asks for grief. *Philipp* demands gladness.

Nevertheless, "it almost seemed to him that he had reason to feel glad". The sentence works against the stability of facts in different steps. "It almost seemed to him" introduces a verb which in itself oscillates between fact and fiction (what seems to be is not, but could be), an idea reinforced by the adverb "almost" which takes away any rest of certainty even from "seeming". Furthermore, the seeming is not a general perception, but just "for him". Then the sentence introduces the new instance of "reason" ("that he had reason") in which facts seem to ground. But this "reason" does not fund an argument, instead it supports a feeling (to feel) which finally is identified as gladness.

The German original offers some more grammatical features which show language's ability to play with what factually is and what conceptually is meant. Translating "so war es ihm fast, als müßt er sich freuen" literally into English, it says: "so it almost was to him, as [if] he would have to feel joy". In this reading, the text includes the following (linguistic) options which play between perception and conception:

– What is, is not what seems to be.
– What seems to be, seems (just) to him.
– A counterfactuality can be introduced through the construction "as if".
– The modal verb "müssen" (have to, should) refers to a deontic modality: the linguistic modality that indicates how the world ought to be according to certain norms, expectations, speaker's desire, etc.
– The modal verb is given in the subjunctive mood which is used to explore conditional or imaginary situations (müsste vs. muss; would have to vs. have to).

It might come to a certain surprise that language has established a special mode of dealing with the discrepancy between what factually is and what eventually could or should be. The German language still maintains specific forms

ihm fast, als müßt er sich freuen." (Kleist 1984: 69) I take the translation from https://vdocuments.site/kleist-earthquake-in-chile.html (15/02/2018)

to express the subjunctive mood whereas English has mainly reduced it to the auxiliary word "would" or to quite abstract constructions like "have reason to".[15]

For the purpose of our argument, we can take from Kleist's sentence an insight of how language operates in the establishment of a correspondence between what one thinks and what is out there: the inner world of meaning and the outer world of factuality. This is an indispensable condition to utopian thought. Utopian thought is not only built on the ability of blending existing and absent realities and constructing new and blended meanings. Utopian thought strongly relates to language features – which at a certain moment might have raised for the sake of coming to terms with this contradiction between inner and outer world and which now are available to continuously open new and unexplored ideas. We can draw three main conclusions form this observation (which might be further explored):

– Words in general and literary words in particular can transform facts into an alternative. They shape experience and perception as much as the potential to change.
– Subjunctive modality is the linguistic expression of the brain's plasticity.
– Literature is the domain of subjunctive modality.

Utopia is possible on the basic conflict between the (perceptual) experience of the world and the mental conception of how it could or should be. Language offers the possibility of performing this conflict and literature can artfully play on that – without further demands and without the fundamental risks of dividing the inner from the outer world.

"A jolt": embodiment of Utopia

Other than the given real experience, utopian thought offers the exploration of alternative facts. In this sense Utopia is "nowhere" – but at the same time it is able to make a whole new world. How does this experience come back into cognition and how can the discrepancy between the inner and the outer world be blended? Is it just an abstract exercise? How is abstraction related

[15] While presenting this idea during a meeting of our Research Centre in Lisbon, my distinguished colleague, the famous translator of *The Lusiads* and admired poet Landeg White (1940-2017) immediately demanded the audience to "Save the subjunctive!"

to experience? These are difficult issues which Cognitive Culture Studies have only started to address. Once again, there seems to be some evidence (to me) that we have reason to believe that literature can help us to better understand this challenge.

As mentioned before, one of the main achievements of the so-called second cognitive revolution is the discovery of embodiment as a central characteristic of human cognition (in contrast, e.g., to artificial intelligence). Kiefer & Pulvermüller (2012: 821) write:

> Finally, the probably most crucial issue to be resolved in future research is the representation of abstract concepts. While the embodiment theory grounds abstract concepts in perception, action and emotion through their reference to concrete situations that can be experienced, the representation of abstract concepts in the sensory and motor systems of the brain has to be further elucidated for a broad range of concepts. This future research will decide whether the embodiment theory of conceptual representations can serve as an integrated framework for both concrete and abstract concepts.

As Kiefer & Pulvermüller (2012: 812) have shown, there is an astonishing congruence in the cerebral representation of words and actions (Figure 3). It seems that the brain simulates the corresponding action when certain words are referred to. The use of language would, in a certain sense, simulate the action related to the word's meaning. As mentioned before, Benjamin K. Bergen's book *Louder Than Words. The New Science of How the Mind Makes Meaning* (2012), shows not only how we build new concepts through the combination (and further also through blending) of existing concepts, like in the example of the flying pig. Bergen also demonstrates how simulation is at the basis of such 'combining' and 'blending'. Bergen writes:

> The idea is that simulation creates echoes in our brains of previous experiences, attenuated resonances of brain patterns that were active during previous perceptual and motor experiences. We use our brains to simulate percepts and actions without actually perceiving or acting. (Bergen 2012: 15)

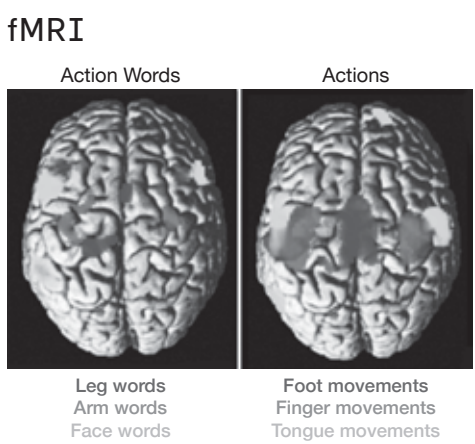


Figure 3 – Congruence in the cerebral representation of words and actions (Kiefer & Pulvermüller 2012: 812)

Based on this observation, a short extract from Peter Handke's "Essay on the Successful Day" might offer a valid insight of the embodiment of utopian thought. The "Essay…" widely explores the difficulty in describing how a successful day might be experienced:

> I can give you no precise picture of a successful day. I have only the idea […] Since there is nothing but the idea, the idea is all I can tell you about. "I'd like to tell you an idea." But how can an idea be told? There came a jolt (the "ugliness" of this word has often been held up to me, but once again there is no other way of saying it). It grew light? It widened? It took hold of me? It vibrated? It blew warm? It cleared? It was day again at the end of the day? No, the idea resisted my narrative urge. It provides me with no picture to serve as an excuse. And yet it was corporeal, more corporeal than any image or representation has ever been; it synthesized all the body's dispersed senses into energy. (Handke 1994: 129)[16]

[16] "Ich habe von dem geglückten Tag keine einzige Vorstellung, keine einzige. Es gibt allein die Idee […] Indem nichts als die Idee da ist, kann das Erzählen nur handeln von ebendieser Idee. »Ich möchte dir eine Idee erzählen.« Aber eine Idee – wie ist sie erzählbar? Es geschah ein Ruck (immer wieder wird mir die »Häßlichkeit« dieses Wortes vorgehalten, und es ist wieder einmal durch kein anderes ersetzbar). Es wurde hell? Es wurde weit? Es griff in mich ein? Es vibrierte? Es wehte warm? Es lichtete sich? Es wurde neu Tag am Ende des Tages? Nein, die Idee, sie sträubt sich gegen meine Sehnsucht des Erzählens. Und trotzdem war sie leibhaftig, leibhaftiger als je ein Bild oder eine Vorstellung, alle die zerstreuten Sinne des Körpers durch sie zusammengefaßt zu Energie." (Handke 1991: 22-23).

The “ugly” term “jolt”, the insistence on the experience being “corporeal” and the description of how “it synthesized all the body’s dispersed senses into energy” are a strong literary evidence for the embodiment theory. The successful day is not just an idea – the idea is bound to “corporeal” experience and seeks correspondence with it. Bergen writes:

> Although research on how people understand abstract language is still in its infancy, evidence like this suggests that abstract concepts are understood in terms of concrete ones, whether during language processing or on their own. (Bergen 2012: 216)

Other than Kleist’s example before, this experience in Handke’s text even seems to challenge linguistic ‘sayability’. There is no grammar category to express the successful day, no linguistic mood for such an experience. There is just a word, an ugly word which seems to point somehow beyond language, so that the text dramatically states that “there is no other way of saying it” and that there is “no picture to serve as an excuse”.

Utopia is nowhere, just an idea – and nevertheless the idea can only be expressed in words based on embodied experience, simulating it as a permanent motor of presence. If Utopia would really be nowhere it would not be possible. By coming to a word – as ugly as it is – Utopia comes back to the mind: as a jolt.

Towards Utopia

Could we suggest then the following conclusions in which Cognitive Culture Studies help to understand why Utopia is possible – and why not?

The point of departure for such an understanding lies in the brain itself and its ability to seek correspondence between internal neural structures and the environment. Any discrepancy between the two needs correction, either in the reshaping of the brain or in an attempt to change the world. Utopia derives from this. “The sources of perfection”, writes Semir Zeki, “thus lie in the brain, and more specifically in the synthetic concepts formed by the brain.” (Zeki 2009: 57). While the existing structures in the brain tend to their own reinforcement, the brain’s plasticity guarantees such adaptation. The notion of what

is and what could or ought to be derives from this conflict between perception and conception; the conflict itself cannot be left unattended. Combining independent concepts to a new concept is as much a technique to come to terms with this conflict as it is conceptual blending. Both allow thinking those things (like flying pigs and surgeons as butchers) which would otherwise not be thinkable. Language itself offers adequate forms and structures to address such utopian thinking: in grammatical moods as much as in "ugly" words. As literature constantly tells us, language brings the unthinkable back to the mind – as an embodied experience.

Chapter VII
Intramental translation. How culture shapes the mind or Why Columbus did not discover America

Roman Jakobson famously suggested three kinds of translation: intralingual, interlingual and intersemiotic translations. The following chapter seeks to propose a fourth kind of translation which might be called "intramental translation". Before becoming a linguistic or semiotic act, translation is a mental process. As we have seen, the human mind is involved in a permanent process of relating what it perceives to certain conceptions of what this might mean (s. chapter I). This relation of perception and conception is crucial to our worldmaking. The process in which perception demands conception and conception builds upon perception might be seen as a process of intramental translation: receiving information and transforming it into meaning. Our mind depends on this permanent process of receiving information and conceiving it as meaning, based on cultural models. In this sense, culture shapes the mind by providing the models through which meaning is conceived. This chapter develops this argument based on a semiotic approach to culture and cognition and illustrates the thesis by drawing on Columbus' difficulty to recognize the land he discovered as a new continent.

When I started to think about how to explain that the Italian navigator Christopher Columbus did not discover America, I had to address a wide range of problems. I asked myself in which language could I discuss the letter which Columbus wrote about his discovery of the Americas. Which language would be appropriate? The Spanish version as this is supposed to be the original? Italian for his compatriots? German for me? Latin for the erudite or English for the sake of mutual understanding?

Columbus himself did not speak any language correctly, moving as a polyglot between Genoese, Latin, Portuguese and Spanish – as Tzvetan Todorov (1984: 29) has shown. And his famous letter was disseminated through Europe both in Latin as well as in many vernacular languages. We even use different linguistic manifestations when referring to the person by calling him Colombo, Columbus, Colón, Kolumbus or even Christoffer Tauber (which is his name translated into German when accepting that Columbus means pigeon – and that it is its masculine form and not the feminine Columba – as I found it in a 16th century edition).[17] Hence, while we do not come to terms with a common word even for the person himself, we do still believe that we are referring to the same person and the same text and the same effect of having discovered America. Alternatively, in other words: Kolumbus, Colombo and all other forms of his name address the same reference. The assumption of the existence of such a common reference is the beginning and grounding of any translation. It stands on the same principle which is the revolutionary discovery of semiotics: that the sign differs from its meaning – and that meaning exists independently of the sign that expresses it. How much is this a mental challenge and how far is any enunciation from any certainty? – this is what current Cognitive Culture Studies research has brought to light. As we are going to see, a central issue of translation turns out to run even deeper: a reference to the vulnerabilities of coming to terms with experience in any sense. The process of coming to terms with experience by establishing its meaning I call "intramental translation".[18]

Before addressing the very demanding case of the discovery of a whole new world, we should look at some of the findings in Cognitive Culture Studies to help us understand how intramental translation works.

A symbolic system such as language is, by definition, built on an arbitrary relationship between sign and meaning but, in the case of iconic signs, one tends to believe they capture their meaning more directly. As we have seen, the so-called ambiguous images convey evidence of a certain complexity in which resemblance and meaning count on a process of identification which matches

[17] Fracanzano da Montalboddo, *Newe vnbekanthe landte Und ein newe weldte in kurtz verganger zeythe erfunden*, Nürnberg, Stüchß, 1508, cap. LXXXIIII.

[18] I first used the term in 2015 in the introduction to the volume *A New Visibility: On Culture, Translation and Cognition*, (Hanenberg ed. 2015).

one and fails another. In the fore-mentioned rabbit-duck image, the observer switches between the perception of the duck and the rabbit – which means that the same visual input is related either to the recognition of the concept of a duck or the recognition of the concept of a rabbit. Nelson Goodman stated famously that "conception without perception is merely empty, perception without conception is blind (totally inoperative)" (Goodman 1978: 6). In other words, the brain adds to the visual input a pre-existing concept which only then conveys meaning to the perceived object. This is why one can see either the duck or the rabbit but never both at the same time. The meaning of the object does not only depend on what it is (and in fact the image is nothing more than an assemblage of lines); adding a concept becomes necessary in order for perception to work at all (s. chapter 1).

Intramental translation guarantees that any assemblage of lines or any other perceptual input at least makes some sense – by referring to concepts already held by the brain. Intramental translation allows us to say: "This is a duck". Or: "The duck has a beak". Or: "The rabbit has floppy ears". The mental process of making sense of experience and perception is a process of translation: transforming input into meaning.

Ambiguous images demonstrate how this process works. One can quite easily imagine how important such a process is in evolutionary terms – referring firstly to indexicality. This makes a decisive difference when a creature is able to translate a certain index, let us say: a brown flowing mane not into the concept of a bush but rather into a lion and consequently into the notion of danger. This might also explain why the perception switches every three seconds: if it is not a bush, the creature should run away immediately.

The splendours and miseries of the brain, as Semir Zeki (2009) called them, depend on a permanent interplay of perception and conception. The translation of any perceptional input into a conceptual frame establishes what we call meaning. Research on concepts is currently one of the more challenging fields of Cultural Neurosciences as a *New Science of Meaning* (Bergen 2012), departing from the general assumption of the embodiment of mental processes. There seems to be evidence for mutual shaping: as much as perception shapes conception, conception determines perception – as we have seen in this case of an ambiguous image.

Neuroscientist Bruce Wexler's argument that brain and environment engage in permanent negotiation over establishing equivalency between that perceived

and that conceived is key to understanding intramental translation. As explained in chapter I, internal neural structures seek correspondence "to those aspects of environmental stimulation that are most commonly experienced by a particular individual" (Wexler 2016: 169). These internal neural structures appear as memory clusters of many kinds: as procedural, perceptual, semantic or episodic memories to which new experiences can be related. Many of these memories are individual even though their content is shaped and trained by social and cultural processes.

From a distinct perspective, anthropologist Bradd Shore has suggested conceiving of culture itself "as a very large and heterogeneous collection of models or what psychologists sometimes call schemes" (Shore 1998: 44). As he explains, the "notion of model provides a bridge between the empiricist concept of culture as 'objects' and the cognitive concept of culture as forms of knowledge (or, more pretentiously, as mental representations)" (Shore 1998: 44). In this sense, culture itself would rely on both the individual mind and the environment, counting on a similar process as that establishing meaning through intramental translation. Therefore, Neuroscience and Anthropology sustain those definitions of culture which link it to the construction of meaning. In this sense, Cognitive Culture Studies brings the mind back to culture and the culture back to the brain where they meet under the auspices of the intramental translation process.

Bradd Shore's suggestion of perceiving culture "as a very large and heterogeneous collection of models" allows us to understand how culture shapes the mind. Understanding a "cultural model as 'a cognitive schema that is intersubjectively shared by a cultural group'" (Shore 1998: 45) means recognizing that mental models are simultaneously both personal and conventional.

Shore distinguishes between linguistic models (such as scripts or tropes) and non-linguistic models (such as image schemas or emotion models). He further distinguishes between expressive and ludic models or theories and task models. For our purpose, the concept that he terms "oriental models" seems especially interesting. They include, among others, spatial models (such as area maps or navigational models), temporal models, social orientation models such as models of social relations, rituals or social role sets and of course divinatory models.

Many of these models belong to the "hidden dimension" of human behaviour, as Edward T. Hall (1990) named it, responsible for that described as the

cultural iceberg in which the vast bulk of its size remains invisible at the surface. Cultural models build a "deep structure of meaning", as Per Aage Brandt has put it, which "would be a constitutive instance at a grounding level, a structuration of thinking proper, or of pure imagining, bound to be expressed and manifested through a process of concretizing transpositions or translations" (Brandt 2004: 258-259). This deep meaning then translates into certain forms of surface meaning, which can be both observed and described.

When we look at the letter Columbus wrote on his first travel across the Atlantic, we will thus look at the surface meaning to discover its deep structure, translated to the surface. "The expressed and expression-bound meaning (the surface content)" writes Brandt, is "thus seen as a translation (or transposition, transformation, or conversion) into some form of verbal discourse or some non-verbal semiotic system, of an underlying, non-discursive meaning (deep content)" (Brandt 2004: 259). This deep content, which anticipates both perception and expression, is the object of a double intramental translation: it is stimulated, addressed and activated by perception (and thus perception translates into conception) and it is identified and expressed in verbal or non-verbal forms (and thus conception translates into that perceived). Deep content may also be referred to as "tacit knowledge" as I have tried to show in chapter II, exploring Michael Polanyi's famous expression that "we know more than we can tell" (Polanyi 2009: 4).

Intramental translation therefore constitutes the way in which we make sense of the world. We rely on cultural models clustered into the embodied neuronal structures that provide the deep content for intramental translation in turn enabling us to understand the world we live in. Whenever this world changes, intramental translation gets into trouble and must try to adapt to the new experience. Furthermore, the embodied neuronal structures and the cultural models they have built generate a certain resistance to any change. Structures and models – though alterable and plastic by definition – tend to stabilize, because their function is exactly that of ensuring a certain degree of stability amidst the overwhelming mass of experiences and information. This is the challenge of the human condition in its deep cultural foundation and its permanent exposition to a world of change.

I would further like to suggest that intramental translation works in a way that is present in what we usually term conceptual blending. Following up on Line and Per Aage Brandt's *Making sense of a blend*, (Brandt & Brandt

2005 we might describe the structure of intramental translation as follows (Figure 1):

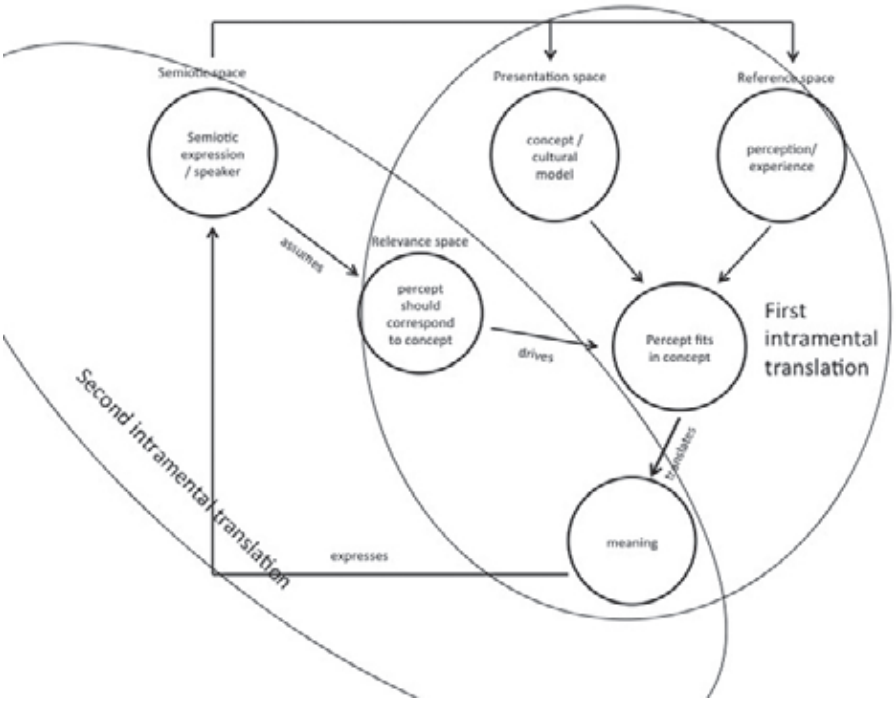


Figure 1

In its search for meaning, the mind addresses two mental spaces: a presentation space for a concept or a cultural model on the one hand, and the reference space for a given experience or perception on the other. These two mental spaces merge into a blended space, where the special features of perception and the general features of the model correspond. The general relevance driver for such a blend is the basic assumption that experience and the cultural model or perception and conception have to correspond with each other. This correspondence is then translated into meaning, the first, tacit and most important intramental translation. A second step links this first mental translation finally to the semiotic space where the translation can be expressed verbally or non-verbally. We can observe intramental translation therefore by drawing back from the semiotic expression to the translation of two different mental spaces into meaning: emerging from the correspondence between the presentation space of a cultural model and the reference space of a given experience.

If intramental translation is such a complex process of understanding, shaping and sustaining what then emerges as meaning, we may now try to observe this process in a historical document which is indeed a mental and narrative construction of what was later named the New World: the most radical ever change in the perception of the world. Columbus wrote his letter on his return from his voyage as information for his sponsor Luis de Santángel, the treasurer to the Spanish King. It was first published in Spanish in 1493 and then in Latin later in the same year.

The main issue for Columbus' writing was to make sure his sponsor believed in the project he had set up: sailing to the West would open the way to India. Therefore, a huge amount of information provided by the Columbus letter addresses the issue of spatial orientation which simultaneously serves as proof that Columbus achieved his goal:

> Sir:
> Since I know that you will be pleased by the great victory which Our Lord has given me on my voyage, I am writing you this letter, from which you will learn how in twenty days I crossed to the Indies with the fleet which the King and Queen, our most illustrious sovereigns, gave me. I found there very many islands inhabited by people without number, and I have taken possession of them all on behalf of Their Highnesses by proclamation and by unfurling the royal standard, and I was not contradicted.[19]

The whole text is written under this condition – or in other words: the whole experience is translated into a concept which might satisfy both the desire for understanding and the necessity for justification. There is no space and no need for a New World because everything which Columbus discovers corresponds to what he had previously conceived of finding. However, the reality needs appropriation which fills any eventual gap between the preconceived model and the reality observed. Appropriation is an act of strengthening the relationship between perception and conception, an act which occurs on the symbolic level. Unfurling the royal standard is such a symbolic act – and naming represents another such case. Attributing a name to someone or something is

[19] All quotes taken from the website "Early Modern Spain at King's College London"; http://www.ems.kcl.ac.uk/content/etext/e022.html (15/10/2017).

an act which establishes both individuality (as something which is called in this way) and addressability within the existing symbolic framework. That is what Columbus presents in the second paragraph of his letter:

> To the first island I found I gave the name San Salvador in memory of His High Majesty who miraculously has given all this; the Indians call it Guanahaní. To the second I gave the name the island of Santa María de Concepción; to the third, Fernandina; to the fourth, Isabela; to the fifth, the island of Juana, and so on, to each a new name.

In the process of naming, Columbus even seems aware of the fact that he is translating the reality into his own framework by expressively stating the difference to the naming applied by the Indians: "the Indians call it Guanahaní".

Appropriation and spatial orientation are the first efforts employed by Columbus to come to terms with reality. The attempt to make sense of the territory continues with a surprising statement:

> After many leagues, having seen that there was nothing new and that the coast was carrying me northwards, which was not the course I wished to take because winter was now drawing on and I proposed to make to the south, and as moreover the wind was carrying me forward, I decided to wait no longer and I turned round and made for a fine harbour. From there I sent two men inland to find out if there was a king or any great cities.

This is interesting in a double sense. First, it seems that the "newness" rapidly turns into something which no longer seems to be new anymore ("that there was nothing new"). And second, there is no doubt on where Columbus wants to go ("I proposed to make to the south"). Both attitudes allow him to make "for a fine harbour" so that he can explore the region further. A fine harbour is a safe point, it is – in a certain sense – the end of travelling and a kind of reaching home, of being there (and of no longer being in a "translational zone"; Apter 2011). Accordingly, the following exploration of the inland is again defined by the expectation of that to be found – and not open to new, unknown or different things. The expectation is to find "a king or any great cities".

Again, Columbus is quite transparent in terms of the concepts which define his observations. His social orientation models guide the perception at every

stage: societies need to be organized and therefore need a king, and people must live together and therefore there must be cities. Even when this expectation cannot be confirmed, Columbus finds a way to maintain his concepts by integrating the contradictory experience through the form of negation. A significant proportion of Columbus' description does not deal with what he did observe but rather with those realities he did not find:

> I found no towns or villages on the coast […] thinking that I could not fail to find great cities or towns. […] They travelled for three days and found an infinite number of small villages and countless people, but no sign of authority […] They have no iron or steel or weapons, nor are they that way inclined […] They knew no sect and were not idolaters […] Throughout the islands I did not find much variety in the appearance of the people, nor in their customs or language, neither he nor his people know what weapons are and they go naked [which means they have no clothes; PH] I have not been able to determine if they have private property, for it appeared from what I could see that what one person had was shared among everybody, especially in the case of food.

Negation is an appropriate means of including into one's concept those elements which are absent, translating a non-reality into the concept of reality. This method has been widely explored in the history of colonialism, turning the descriptions of supposed deficits into legitimations for appropriation: If there is no authority and if authority must be, then we can be the authority.

Columbus continuously tries to confirm his concepts so that the reality he found could make sense to him. Even when the difference is as radical as in the cases of absence or negation, the affirmation translates the new reality into an unquestioned, predefined structure. Thus, it turns out to be possible to speak about realities which indeed go beyond the previously known horizon.

Another very common strategy or technique in intramental translation is comparison. We also find a considerable number of moments in which Columbus translates the new reality into his familiar cultural models by comparing what he sees with what he knows:

> I saw that they were as green and as beautiful as they are in Spain in May […], and there where I travelled the nightingale and other birds of a thousand kinds were singing in November. […] There are many harbours on the sea coast

> beyond comparison with any I know in Christendom, and so many good, wide rivers that it is a marvel. […] On all the islands they have very many canoes like galleys with oars, some large, some small; and some, indeed many, are larger than a galley with eighteen benches. […] this island is larger than England and Scotland together […] This other island of Española is larger in circumference than Spain from Collioure in Catalunya round the coast to Fuenterrabía in Vizcaya […] they are all people of very beautiful appearance and are not black as in Guinea […]

Two of these comparisons are especially interesting. The last sentence identifies how Columbus had already integrated quite recent realities into the framework of his cultural models as the black people from Guinea belong to regions which had themselves only recently begun being explored by the Portuguese voyages along the West African coast – in a way which seems even to have shaped the expectations concerning the islands Columbus discovered: people there could or should be like those discovered in other coeval maritime endeavours.

The second comparison, which is especially interesting, comes when Columbus considers what he observes as "a marvel". There are some similar expressions in the letter:

> There are six or eight kinds of palms which are a wonder to behold for their beautiful variety […] There are marvellous pine groves and broad meadow […] Española is a marvel […] they give a marvellously good account of everything […] the greatest marvel in the world.

The "marvel" and the "wonder" have been identified by many scholars as a main characteristic feature of Renaissance discourse, as for example by Stephen Greenblatt in his *Marvelous Possessions: The Wonder of the New World* (1992), by Lorraine Daston and Katharine Park in their *Wonders and the Order of Nature* (1998) or by Marília dos Santos Lopes in her *Writing New Worlds. The dynamics of curiosity in Early Modern Europe* (2016). A "marvel" or a "wonder" is a concept which allows for the integration of those features which are not immediately understandable, plausible or conceivable into the framework of cultural models. Concepts like the marvel or the wonder are transit zones to open a given cultural model to exceptionality: something able to

be conceived as unconceivable. Marvel and wonder are placeholders for the mentally untranslatable.

By using terms such as wonder or marvel, Columbus seems aware that his description borders on certain limits of the given cultural model – but still addressable within that same model. Columbus deploys the concept of wonder and marvel quite conservatively, at least compared with later travellers and authors who wanted to stress the newness of their discoveries. However, though it is his strategy to confirm his findings as within the previously defined project and within his cultural expectations, he cannot completely abstain from using those concepts that allow him to mark out the borderline with the unexpected.

Wonder and marvel have always been part of the pre-scientific discourse. At one moment of his letter, Columbus directly includes the marvellous myth of Amazonia (which Marco Polo's travelogue had again disseminated). However, Columbus builds a certain buffer or a mental reservation into the description, when he makes it clear that this island "on which there are no men" (which means only women) has not been seen by himself but by Indians he met and "who are the people who have relations with the women of Matinino". Columbus seems to replace the real source of his model (which is Marco Polo's account of Amazonia) with an imagined source that confirmed his model beyond experience. Today, we call such statements "alternative facts".

A similar practice may be identified on those occasions when Columbus describes the Indians he had met, e.g., as we have seen, when he writes "Throughout the islands I did not find much variety in the appearance of the people, nor in their customs or language". Of course, Columbus cannot distinguish between languages that he cannot understand – and later travels will actually confirm a wide range of languages without any mutual understanding among them.[20] And he also cannot distinguish among cultures that he does not recognize in their own right. Columbus is still far distant from what ethnology will later term the "invention of culture" (as Roy Wagner, 2016, has named the anthropological work on culture) and which leads to other forms of projection, such as the concept of the "*bon sauvage*". In this sense, Columbus has never been modern at all: for him, there is no new world to be invented. It is the old one that he confirms.

[20] *Cf*. Kolumbus 2006, p. 62.

There are two further moments in which Columbus appears to struggle with translating his experiences into his cultural models. He writes:

> […] apart from these hundred and seven leagues, to the west of me were two provinces which I have not visited, one of which they call Avan, where the people are born with tails.

Again, Columbus does not leave any doubt that these people "born with tails" have not been the object of his own observation but that he was told about their existence. The German translator of Columbus' letter is more explicit on the real source of the statement, when he writes (now in my English translation):

> There are people born with tails, following, as far as I understood, the Indians who I had captured, who really know and tell a lot about all these islands. Ptolemy, too, says that there are living people with tails in these regions and islands.[21]

This German complement to the original text reveals the cultural model and its source which Columbus refers to without naming. Finding people with tails was such a scholarly sustained expectation that Columbus even finds them where they really do not exist. This is the powerful effect of intramental translation in exceeding experience. In the same sense, Columbus writes: "On this island there are many spices and great mines of gold and other metals" which is nothing that he had really found and observed but an immediate translation of his expectations.[22]

Columbus was really struggling to correctly translate his experiences into the cultural models he relies on. In one sentence, he manages once to attribute reason to perception before then returning to the modelling capacity of his previous conception. He writes:

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[21] *Der deutsche Kolumbusbrief* (1900): "Dann wyter von der ob genanten hundert und zwenczyg myl belibet mir uff der syten gen occident zwü prouinczen die ich nit durch faren haben […] Da werdent lüt geborn mit schwenczen […]. Dem nach und mir zu versteen gend die indier die ich mit mir gefangen für, wann sy wissent by einem billichen gar wol zu sagen von den inßlen allen. Von den provintzen unnd inßlen sagt ouch ptolomeus wie do lüt sind die schwencz hond […]".

[22] *Cf*. Kolumbus 2006*:* 58.

> So I have found no monsters, nor heard of any except on an island here […] which is inhabited by people who are held in all the islands to be very ferocious and who eat human flesh.

No monsters, but cannibalism. The expectation is to find monsters, an expectation which Columbus rejects by experience. Cannibalism then comes in as confirmation of those mythical accounts which had referred to monstrous creatures and practices. The issue of cannibalism became a prominent feature in the later image of the New World and especially of what today is called Brazil – in a way that has been widely productive even in post-colonial times. However, there can be no doubt that the Columbus statement on cannibalism must be considered as much more a product of intramental translation than a realistic account of that actually perceived.

Wonder, marvel, myths and monsters are a very comfortable instrument for widening understanding and explanation without fundamental risks. However, as we have seen, Columbus even gives an explicit account of the possible limits to his understanding. Furthermore, on several occasions in his letter, he introduces a kind of caveat concerning the information he is setting out, a marker for doubt and dubiousness:

> I understood well enough from some other Indians I had already taken that the whole of this coast was an island […] I am told that they (the trees) never lose their leaves as far as I can understand […] These provinces cannot be less than fifty or sixty leagues in length, as far as I can understand from the Indians I have with me who know all the islands. […]

Columbus counts on uncertainty concerning his own limits of understanding. This is a clear sign of his mental effort to translate his experience into meaningful information – though his experience is significantly limited. In the cases quoted before, the limitation of his experience (which then constitutes a limitation of mentally translating this into certainty) is due to the lack of time, i.e., as Columbus cannot tell whether the trees never lose their leaves because he did not stay there for more than a few days, which means a lack of time to prove this fact. The whole scene seems to correspond more to the literary *topos* of a *locus amœnus* which Columbus was familiar with than to observation and experience: “and there where I travelled the nightingale and other birds of a

thousand kinds were singing in November", a nightingale which certainly does not exist in America but does appear in any idealistic and enthusiastic depiction of nature.[23]

The second example of a certain disclaimer in "as far as I can understand from the Indians" is even more significant because it shows how much Columbus' knowledge is limited and shaped by its sources. This is especially relevant when it comes to evaluating the riches of these lands:

> On this island there is gold beyond measure and I have Indians with me as witnesses about this and other islands.

The so-called Indians serve as witnesses to confirm what on the one hand Columbus expected to find and on the other what he could not experience himself. It would not be incorrect to say that the Indians are taken as proof of Columbus' pre-conceived cultural model. In intramental translation, expectation and experience work together as mutually enhancing. Before we return to this aspect, and leaving out any reflection on the fundamental issue of how Columbus might communicate with the Indians at all (the matter of sign language and the violence with which they were forced to learn Columbus' language as fast as possible, is an important issue in post-colonial Translation Studies), I would like to draw attention to one passage in which Columbus closely verges on an "invention of culture" and the recognition that he had discovered something completely unexpected – and that his mental setting therefore could or should have been changed. In the following passage, many of the intramental translation techniques presented thus far come together: negation, expectation and appropriation. One aspect, though, is significantly missing: comparison.

> They knew no sect and were not idolaters, except that they all believe that power and good come from heaven, and they believed very firmly that I and these ships and crew came from heaven and in this belief they received me everywhere, once they had overcome their fear. And this is not because they are ignorant; rather, they are of subtle intelligence and can find their way around those seas, and give a marvellously good account of everything; it is only because they have never seen men clothed or ships of that kind. When I arrived in the Indies, at the

[23] *Cf*. Kolumbus 2006*:* 57.

> first island I found I took some of them by force so that they could learn and give me information about what there was in those parts, and in that way they soon understood us and we them, whether by word or by sign; and they have been very useful to us.

It appears that the Indians applied a completely wrong concept to their experience of Columbus' arrival: that Columbus had come from heaven. However, this seems not to be a reason to criticize them as Columbus immediately offers an explication for their misapprehension: "it is only because they have never seen men clothed or ships of that kind". Well, a similar thing may be said about Columbus and his men: "it is only because they have never seen men without cloth or ships of their kind". Columbus believes that the error is only on one side – because he would not recognize any cultural misunderstanding of his own, though he and his men had also never seen this reality before. It is striking the way Columbus identifies the Indians' belief as a false belief – without recognizing the fallibility of his own beliefs as regards what he sees. This is still more significant when we consider that there seems to be a common ground of beliefs that Indians and Columbus apparently share: "they all believe that power and good come from heaven". However, Columbus does not allow any comparison at this point – because it would weaken his own intramental translation. And the rejection of any comparison which might become a motor of self-critique continues: "they soon understood us and we them" – this affirmation seems to be true only in a very limited way. When Columbus states "they have been very useful to us", no such reciprocity can be established.

The belief "that power and good come from heaven" is in itself a blurred cultural model: either you think of heaven in terms of spatial orientation or in terms of a divinatory model. The English language offers two words to distinguish sky from heaven whereas both merge in Columbus' Spanish word "cielo" or in the German "Himmel". What we can at least say is that any English translation must always opt between one or the other cultural model – whereas Columbus was able to leave it open. Certainly, his intramental translation of what he thought the Indians thought of him has to count on an undefined or diffuse range of meanings, just like the ambiguous image of the duck/rabbit or the ambiguous word "cielo" as "sky/heaven".

As with all translation, intramental translation is also not just about establishing sense, it is also about communicating it for further purposes; in keeping

with Per Aage Brandt's expression: translating it from the deep content to the surface meaning. We have already seen several examples to what extent Columbus' preconceived models and expectations shaped his perception of reality in the sense Bruce Wexler describes as the central relation between culture and brain, where – as quoted before – a set of internal "neural structures" tends to search for an increasing "sense of correspondence between the external world and the internal one, and progressively limits the power of sensory stimulation to change the structures" (Wexler 2006: 169). Such neural structures do not only shape understanding but they also determine future action, as Columbus himself brilliantly states: "This island is much to be desired and, once seen, never to be left".

From this standpoint of a deep conviction resulting from intramental translation, Columbus can then develop his attempt to convince his reader of his success in finding a route to India: "the most suitable place, most conveniently situated for the gold mines and for all trade from the mainland here as well as from the land of the Great Khan which will bring very great trade and profit". Thus, intramental translation appears as a continuous process linking preconceived models, perceptions and a sense of future action: all within the simple goal of establishing a correspondence between perception and conception. Therefore, towards the end of his letter, Columbus proudly announces:

> That is enough. Eternal God, our Lord, gives to all those who follow His path victory over things which appear impossible, and this was a very notable example. For, although these lands may have been spoken or written of, that was all conjecture, without eye-witness, and those who heard the stories listened to them and judged them more as fables than as having the least vestige of truth.

Today, we know that Columbus was completely wrong. He did not find what he wanted to find, he did not see what he saw, these Indians are no Indians, the amazons and cannibals do not exist. And nevertheless; as much as he really discovered, without knowing it, a whole New World, he proved just as much, and again without knowing, the power of intramental translation.

To conclude: Columbus' letter offers new insights into intramental translation in the way that it allows the identifying of certain techniques applied in this process. The most outstanding technique is the oppressive implementation of expectations on experiences, which might best be exemplified by the use of

the term “Indians” for the people found on the islands. Expectation is a ground--laying characteristic of intramental translation in a general sense but Columbus’ letter seems to be an example in which conceptual expectations hold dominance over experience. A second technique is appropriation, which Columbus applies by naming the islands and landscapes – even while knowing that they hold different names in the language of the Indians. In Schleiermacher’s (2002) distinction between two different methods of translation, appropriation would be the type that is called “domestication”. A third technique is negation, which allows for not only addressing that experienced but also that missed or absent. Comparison comes in as a fourth technique, which permits establishing a relationship between that already known and that new. A fifth technique involves extending the concept to the unconceived – which in Schleiermacher’s sense would be the translation method of foreignization: marvel and wonder mark such an extension in which expectations can be suspended. Finally, buffering the understanding by introducing a certain degree of uncertainty also provides a valid technique in intramental translation.

This might not yet be the complete picture of what intramental translation is. However, with Columbus’ help, we might have discovered this whole new world of a powerful mental process in which culture and cognition blend into the emergence of meaning.

Chapter VIII
Culture, cognition and intercultural communication

Culture as a paradigm

When Alain Touraine published his book in which he declared culture to be *A New Paradigm for Understanding Today's World* (2005/2007), many of the current challenges to culture were still not quite visible: the protests against a satirical presentation of Mohamed in Denmark and later in France, debates about the burka, circumcision and children forced to be brides, the denunciation of Mediterranean cultures as lazy and ineffective, the position towards migration and refugees, the BREXIT-shock or the election of Trump as the 45th president of America. All these events and developments have shown how much culture is a political and social issue for the 21st century. The return of religion as a cultural factor, the new importance of ethnic belonging, the popularization (and often vulgarization) of discourses and practices seem to indicate an era where culture is at the heart of the debate.

Knowledge about culture is therefore a key to a better understanding of these processes. Culture is a multidimensional phenomenon which cannot be reduced to a simple formula. Culture is about identity and community as much as it is about religion, nation, politics, geography, tradition, poverty, values, environment, commodities or technology. Therefore, the new and challenging dynamics of culture might be addressed by considering its three fundamental dimensions: the social, the material and the mental dimension outlined in the context of a semiotic approach to culture; Posner 1991, 2004). Culture is a social phenomenon as it is more than just an individual trait – and therefore nations, ethnicities, communities or religions often offer the primary adjective to describe a culture as, e.g., a German Culture, or an Islamic Culture. Culture is organized by groups and institutions (schools, governments, museums) which

share and promote a common way of life. But culture materializes itself necessarily in objects, building, texts and artefacts, allowing for a continuous use by institutions and individuals. And finally, culture is in the mind of its members in the form of codes, values, patterns and scripts which allow for acting within the social dimension and making a proper use of its material manifestations.

The threefold reality of culture is itself a dynamic relation. Individuals make up the social dimension as much as the individuals are made up by the social dimension. Mental and social effects are produced by texts and other material agents like architecture, arts or laws. Per Aage Brandt has convincingly suggested that there is a certain tension between the mental and the material dimension of culture on the one hand and its social dimension on the other hand (Brandt 2011). "Socio-functional structures", as he puts it, tend to be dynamic and in a permanent move to change whereas the mental and the material dimension show a certain tendency to stability, which means a certain resistance to change. Socio-functional structures are dynamic because they reach out to other cultures through traffic, travel and trade, in a permanent need of alimentation, development and growth. The material and immaterial (or mental) dimensions of culture oppose themselves against this drive to change: to guarantee the persistence of codes and texts (and artefacts, laws and other material achievements).

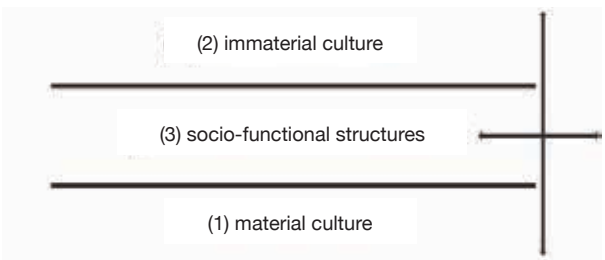

Figure 1 – (Brandt 2011)

Per Aage Brandt's model of a material and immaterial culture with a tendency for stability and the dynamics of socio-functional structures with its trend for change has been developed as an attempt to explain contemporary conflicts – mainly caused by fundamentalist movements against the so-called modern Western society. Brandt's model can productively be expanded also to the dynamics of an individual participating in and belonging to a certain culture. On

the level of the individual, the immaterial dimension of the mind (and its concepts, beliefs or values) corresponds to its material embodiment in the brain, both showing a certain tendency toward stability and a certain resistance to change. The socio-functional effects of experience and perception may work in favour of a confirmation of these traits or against this stability, calling up for a need for change and transformation. Two observations may therefore serve as important assumptions when it comes to understanding culture, cognition and intercultural communication.

The first observation is the recognition that culture shapes not only the mind but that this shaping actually translates itself into brain structures and processes. Culture might actually shape and change the brain. The question of "embodiment" is – as we have seen – a current and urgent issue of cognitive sciences, especially when linked to the field of culture. Bruce Wexler has been one of the first scholars (as early as 2006) to study intensively the relation between brain and culture, claiming a "correspondence between the external world and the internal one" (Wexler 2006: 169), a strong motive in the search for stabilization which then makes changes less desirable and less probable.

The second observation for a better understanding of culture, cognition and intercultural communication is that perception and experience actually "play against" the tendency toward resilience and stability – and therefore count on another outstanding feature of mind and brain which is the ability for learning, enabled by a surprising plasticity of the brain. Much as the brain tries to confirm proved and tested processes and structures, it is also able to adapt to new challenges and tasks. Though the brain runs on the reliability of routines, it remains capable of modulation and adaption, thus engaging in the continuous force dynamics between change and stability.

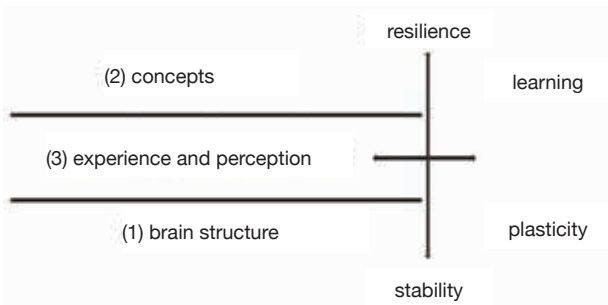

Figure 2

Culture as a collection of models

Three examples may serve as an illustration of this force dynamics on quite different levels. We have already mentioned the famous "ambiguous images" which can be seen in at least two different meanings. As has been explained in the previous chapter, what happens, when the observer switches between the perception of the duck and the rabbit, is that the same visual input is related either to the recognition of the concept of a duck or the recognition of the concept of a rabbit. Adding a concept is necessary in order for perception to work.

The following little story illustrates a further aspect of the force-dynamics between change and stability.

> Linda is thirty-one years old, single, outspoken, and very bright. She majored in philosophy. As a student she was deeply concerned with issues of discrimination and social justice and participated in antinuclear demonstrations.
> Which of the following two alternatives is more probable?
> *Linda is a bank teller.*
> *Linda is a bank teller and active in the feminist movement.* (Gigerenzer 2007: 93)

As Gerd Gigerenzer has shown, a majority of people would choose the second answer for being "more probable". When reading a story like Linda's, people engage in two assumptions: First, they presume that a story which is told before answering to a question must be a meaningful support for the right solution. And on a second level, they hold a concept of life in which the things one does at a certain time are meaningfully related to what one does earlier or later in time – something which people would commonly name the "sense of life".

But looking strictly and consciously at the task, it obviously turns out that the first answer is "more probable" because from a rational and logical point of view it is always "more probable" that one thing happens (Linda being a bank teller) than two things at the same time (Linda being a bank teller and something else). The interesting result of this example is that people do not rely on logical operations at first hand or naturally. On the contrary, people engage in assumptions like "stories make sense" or "life makes sense" – so that a simple equation turns into a complex interplay of meanings.

Making sense of perception, of observation, of stories or even of life is a central human feature. Relating concepts and assumptions to perception and observation is a complex task in which people engage permanently – following the preferences acquired through education and learning. One other essential feature in this process is the way of linking things together as in the following example:

Which go together?

Figure 3 – (Shaules 2015)

There are two ways of "grouping" these elements and making sense of these images. One first answer would be: the panda and the monkey group together because they are both animals. And the second answer could be that the monkey and the banana belong together because the monkey eats bananas. In the first case, the relation is built on a categorical principle (the class of animals). In the second example the relation between the objects themselves is emphasized. Some people tend to think first in terms of categories, other might prefer to address the relational bond. People develop different "cultures of relatedness" which sustain the way they make sense of experience.

Such differences might be interpreted as the main distinction between what is called a holistic and contextual way of thinking and a more categorical and object-oriented way, frequently identified as the so-called Asian or Eastern and the Western preferences for making sense of the world. It might not be necessary to defend such a persistence of a "Geography of thought" (as it was called by Nisbett 2003), mainly when considering how much Eastern and Western ways of life got entangled in contemporary society. Nevertheless, these different approaches to an understanding of things and their relation to each other explain both the need for making sense and the manifold ways to do so.

Culture might actually be the instance by which such routines and manifold approaches are developed, cultivated and shared. Through education and learning culture plays a central role in making concepts, assumptions and preferences relevant. As Bradd Shore has suggested and as has been quoted before, culture is therefore "best conceived as a very large and heterogeneous collection of models or what psychologists sometimes call schemes." (Shore 1998: 834). The "idea of cultural models is a useful alternative to dissolving the concept of culture altogether into vague notions of power or discourse." (Shore 1998: 853)

In this sense, Shore has presented an extensive list of models whose elaboration might vary from culture to culture. Such a list would include linguistic models (scripts, lexical models, grammatical models, verbal formulas, or trope models) as well as non-linguistic models (image schemas, emotion models, action sets; gestural models, olfactory models, sound image models or visual image models). Furthermore, such cultural models can be distinguished by their function as in orientational models (spatial models, temporal models, social orientation models, diagnostic models or divinatory models) as well as in expressive/conceptual models (classificatory models, ludic models, theories, folk theories or task models). Cultural models are as much in the mind as they are shared through social imparting in education and learning.

Challenges of intercultural communication

Speaking about culture as a "very large and heterogeneous collection of models" and thus simultaneously as a material reality, a social practice and as a mental disposition allows for a better understanding of the challenges in intercultural communication. Culture is not just the visible and tangible part of art, literature, cooking or dressing, which one tends to identify first. Beneath these superficial manifestations of culture lie their deep roots in concepts, assumptions and preferences supported by a variety of shared cultural models, differing as much from culture to culture as art, literature, cooking or dressing. The image of the so-called cultural iceberg shows intuitively what Joseph Shaules (2007) has called "Deep Culture" and what he has identified as the "Hidden Challenges of Global Living".

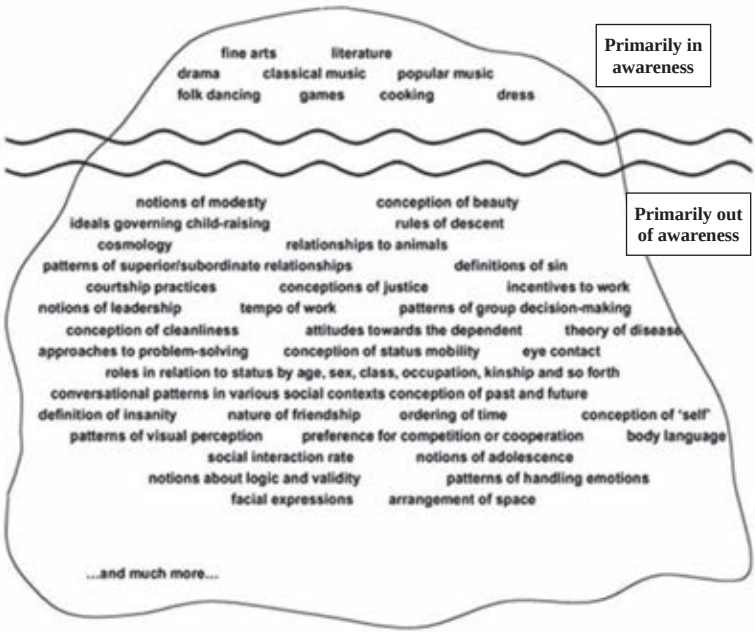

Figure 4 – (Shaules 2007)

As culture models and shapes cognition and behaviour in such a deep and comprehensive way, intercultural encounters are always moments of a special challenge to the force dynamics of a tendency toward resilience and stability on the one hand, and, on the other, the ability for change in learning and in the plasticity of our cultural and cognitive models.

Joseph Shaules (2014) has nicely described the experience of intercultural encounters by referring to Victor Fleming's famous movie *The Wizard of Oz*, in which Judy Garland plays the role of the little girl named Dorothy Gale from Kansas who finds herself suddenly and surprisingly projected into the marvellous and magic Land of Oz. Taking Shaules' suggestion one step further, one can identify five different moments which mark the cognitive challenges of an intercultural experience.

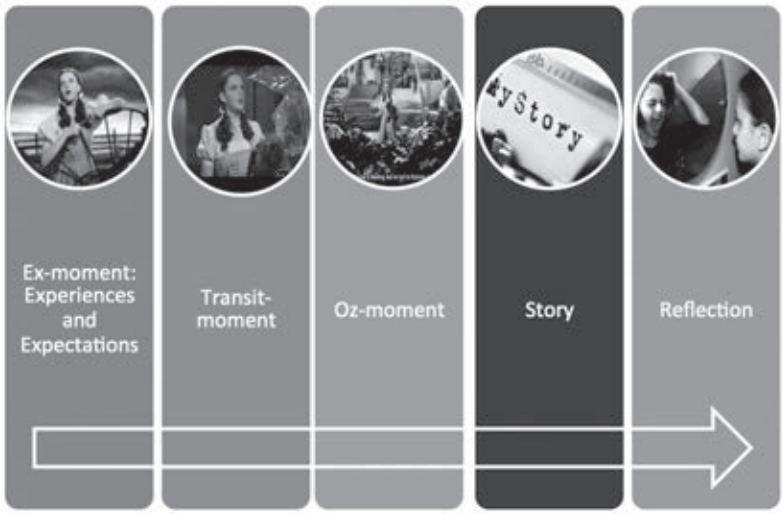

Figure 5

The first moment might be illustrated by the famous song "Over the rainbow" in which Dorothy develops her dreams and expectations of a different world where "the clouds are far behind" her and "trouble melts like lemon drops". Intercultural encounters are always built upon previous experiences (like "clouds" and "troubles") and defined by certain expectations – whether good or bad. This first moment might be called the "Ex-moment" of an intercultural experience.

A second moment could be called the "Transit-moment" in which the transition from one to the other culture is made. These transitions often appear in the form of a voyage or a spatial change, frequently powered by technology or other means of extension. The impact of the transit-moment is often underestimated, though it is the immediate condition of the intercultural experience itself. Going for a long trip by ship, a tiring walk by feet, a short flight over or scaling several times: all this will define the moment in which one experiences the other culture for the first time. In Fleming's movie this is the moment when Dorothy gets out of her bed and opens "the door to Oz", while the movie picture changes from black and white to colour.

The third moment is the "Oz-moment" itself, as termed by Joseph Shaules. It is the moment, when Dorothy suddenly realizes how different and strange things are to her in this magic land. It is the moment when Dorothy addresses her dog by concluding: "Toto, I have a feeling, we're not in Kansas anymore."

Taking into account what has been said before about the relation of culture and cognition, Dorothy (as any other person in an intercultural encounter) will then try to make sense of what she experiences in this different culture. She will use her models and concepts, her preferences and assumptions to make "a story out of" this experience. On the way to make sense of the "Oz-moment", her narrative ability (as seen before in Linda's story becoming a bank teller or more than that) will try to establish a constructive relation of challenging, strange or even disturbing experiences, always trying to come to terms with the force dynamics of a tendency toward stability and an ability (and need) for change.

The last moment of such an intercultural experience could then be a moment of reflection in which the individual beyond his or her first reaction in the Oz-Moment, and his or her narrative construction of sense through a narrative, engages in a critical process of pondering the experience and making it part of a rational argument. In this moment, the individual might even develop a critical standpoint towards his or her own models, concepts and assumptions.

From culture to conviviality

The insights described in the previous sections correspond to the notion of culture as a central paradigm of contemporary society. The intimate relation of culture and cognition and the force dynamics working between a tendency toward stability and an ability for change might explain many of the conflicts which characterize political and social challenges all over the world. Resistance to change on the one hand and an ever faster driving socio-functional development on the other hand seem to be a key issue for our global future. Neither tendency is wrong. They simply correspond to the human condition as depending on its cultural models and as being constantly able to go a step further. Nevertheless, the main conclusion from such a reflection might not be a defeatist acceptance of this condition but an effort to recognize it not as a motor of hostility but as an invitation for a plural recognition of cultural diversity. Based on and extending the studies by Wolfgang Welsch (1999), Paul Gilroy (2004) and Nowicka & Heil (2015), there might be five steps on this way:

The first step would be to recognize the relation between culture and cognition and its benefits in the construction of concepts and models which help coming to terms with experience and perception.

The second step would be to address multiculturality as the recognition of a diversity of cultures and the richness of their concepts, models and expressions.

Under the concept of interculturality, a third step would consist in looking at the relation between cultures not just in their diversity but in their relatedness, offering new opportunities.

In the term transculturality the fourth step would then recognize the openness, self-insufficiency and dynamics between cultures and their mutual interdependence which leads to conviviality as a final step to guarantee that cultures can live together in plural recognition.

From the standpoint of the individual, culture is about identity, culture is about “me”. Multiculturality is about the others, about “them”, interculturality about “you” and transculturality and conviviality finally about “us”.

Future Cognitive Culture Studies might engage in enhancing knowledge on the challenges and the common human ability for living together.

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Editorial Note

The chapters of this book have been previously published in different contexts and volumes. They have been revised for this joint publication.

Chapter I: Intersecting 'Nature' and 'Culture': How the Study of Culture could enhance Cognitive Science. In: Berning, Nora; Nünning, Ansgar; Schwanecke, Christine (eds.). 2014. *Reframing Concepts in Literary and Cultural Studies. Theorizing and Analyzing Conceptual Transfers*. Trier: WVT, 185-202.

Chapter II: "My Favourite Things". The proximal term of tacit knowledge. In: Maria Franco/Bernd Sieberg (eds.). 2011. *Proximidade e Distância. Estudos sobre a Língua e a Cultura*. Lisboa: UCE, 169-180.

Chapter III: Warburg and Jolles: a cognitive approach to the art of viewing and the art of reading. In: Anabela Mendes *et al*. (org.). 2012. *Qual o tempo e o movimento de uma elipse? Estudos sobre Aby M. Warburg*. Lisboa: UCE, 159-169.

Chapter IV: Long waves or vanishing points? A cognitive approach to the literary construction of history. In: Ansgar Nünning, Kai Marcel Sicks (eds.). 2012. *Turning Points. Concepts and Narratives of Change in Literature and Other Media.* Berlin: De Gruyter, 145-157.

Chapter V: Force dynamics: Mental structures for conflict or How Benjamin th/sought history. In: Helena Gonçalves da Silva *et al*. (ed.). 2010. *Conflict, Memory Transfers and the Reshaping of Europe*. Newcastle upon Tyne: Cambridge Scholars Publishing, 94-105.

Chapter VI: Why Utopia is possible and why not, to be published in the proceedings of the Autumn Colloquium 2016, University of Minho.

Chapter VII: Intramental Translation or Why Columbus did not discover America. In: *La circolazione dei saperi in Occidente: teoria e prassi della traduzione letteraria*, ed. Fabio Scotto and Marina Bianchi (eds.), Milano, Cisalpino: (*in print*).

Chapter VIII: Culture, Cognition and Intercultural Communication. A Portuguese version is published in: Artur T. Matos, Guilherme d'Oliveira Martins & Peter Hanenberg (eds.). 2017. *O Futuro ao nosso alcance. Homenagem a Roberto Carneiro.* Lisboa: CEPCEP, FCH, 749-760.

An English version will be published in: Mira Miladinović Zalaznik and Dean Komel (eds.). 2008. *Freedom and Justice as a Challenge of the Humanities*. Frankfurt/M.: Lang.

Cognitive Culture Studies aims at studying the relation between mind and culture and their mutual interdependence. The mind produces culture as much as it is shaped by it. How the mind reaches out to the world out there and how this world translates into meaning, this is the overall issue of this book.

The eight chapters claim, examine and perform the possibility and necessity of intersecting the study of culture and cognition by introducing key concepts like 'tacit knowledge', 'force dynamics', 'conceptual blending' and 'intramental translation'.

They apply these concepts in the analyses of literary works, Walter Benjamin's ninth thesis on history, the idea of Utopia and Christopher Columbus' non-discovery of the New World, alluding in the last chapter to the practical consequences of tacit knowledge and intramental translation in the practice of intercultural communication.

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